17-192

TRANSCRIPT OF RECORD.

SUPREME COURT OF THE UNITED STATES.

No. 101.

THE ATLANTIC WORKS, APPELLANT,

vs.

EDWIN L. BRADY.

No. 102.

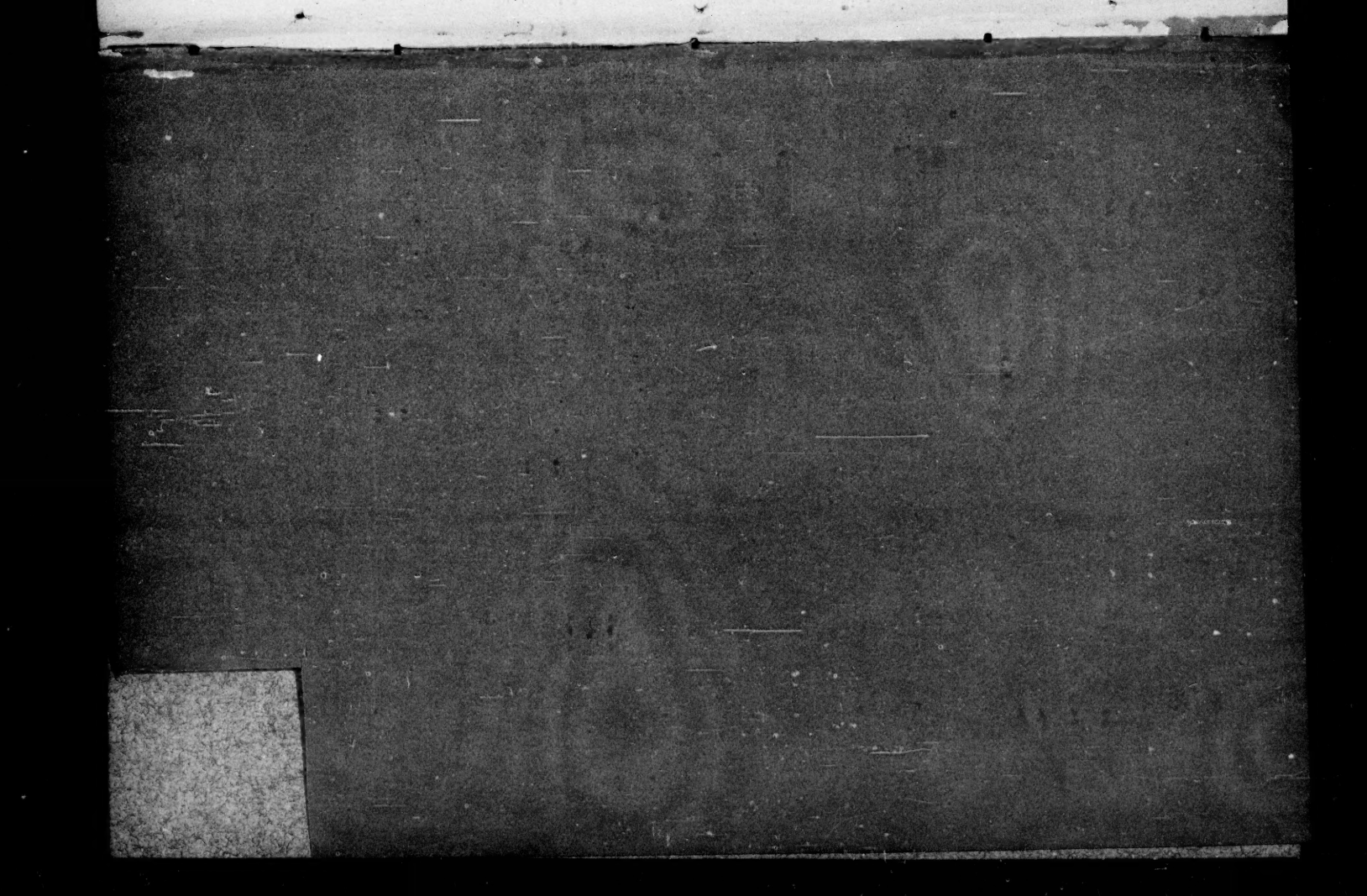
EDWIN L. BRADY, APPELLANT,

vs.

THE ATLANTIC WORKS.

APPEALS FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE DISTRICT OF MASSACHUSETTS.

FILED OCTOBER 18, 1879.



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Circuit court of the United States. District of Massachusetts. In equity.

EDWIN L. BRADY, COMPLAINANT,
v.
THE ATLANTIC WORKS, DEFENDANT. } Transcript of record.

1 UNITED STATES OF AMERICA:

At a circuit court of the United States, begun and holden at Boston, within and for the district of Massachusetts, on Wednesday, the fifteenth day of May, in the year of our Lord one thousand eight hundred and seventy-eight, before the honorable Nathan Clifford, associate justice.

EDWIN L. BRADY, COMPLAINANT,
v.
THE ATLANTIC WORKS, DEFENDANTS. } In equity.

2 The bill of complaint in this cause was filed in the clerk's office on the ninth day of April, A. D. 1868, and was duly entered at the October term of this court, A. D. 1867, and is in the words and figures following:

3 *Bill of complaint.—Filed April* 9, 1868.

Edwin L. Brady, of Stamford, in the State of Connecticut, brings this bill of complaint against the Atlantic Works, a corporation duly existing under and by the laws of said State of Massachusetts, and having its workshops, office, and usual place of business in Boston, in said State of Massachusetts, and in the said district.

And thereupon your orator complains and says that he is a citizen of the United States of America, and that he was the original and first inventor or discoverer of a new and useful improved dredge-boat for excavating rivers; that being such inventor, he duly made application in writing to the Commissioner of Patents of the United States for the granting of letters patent for said improved dredge-boat, and duly sworn to the specification for that purpose; that the improved dredge-boat was not, at the time of said application, in public use, or on sale with the consent or allowance of your orator as the inventor thereof, contrary to the provisions of the statutes of the United States in such cases made and provided, and was not known or used by others anterior to the invention thereof by your orator.

That your orator duly complied in all respects with all the necessary conditions and requisitions of the statutes of the United States in such cases made and provided prior to the granting of the letters patent hereafter mentioned.

4 That, on the seventeenth day of May, in the year 1867, your orator duly filed in the Patent Office of the United States his caveat, substantially describing and setting forth the said invention, for which he afterward applied for and received letters patent.

That on the seventeenth day of December, in the year 1867, letters patent of the United States, bearing date on the said last mentioned day, were issued to your orator according to law, whereby were granted to him, his heirs, executors, administrators, or assigns for the term of seventeen years from said December 17, 1867, the full and exclusive

right and liberty of making, using, and vending to others to be used, the said invention, a description whereof was given in the statement or schedule which was annexed to said letters patent, and was made a part of the same.

The said letters patent were issued in the name of the United States of America, and were sealed with the seal of the Patent Office of the United States, and were signed by the acting Secretary of the Interior of the United States, and by the Commissioners of Patents, and were issued and delivered to your orator, and are now in his possession, ready to be produced before this court as it shall direct.

That before your orator obtained said letters patent he delivered to the Commissioner of Patents a written description of his said invention, and of the manner and process of making, constructing, and using the same in such full, clear, and exact terms as to make any person, skilled in the art or science to which it appertains, or with which it is most nearly connected, to make, construct, and use the same; and also, therein particularly specified and pointed out the part, improvement, or combination which your orator claimed as his invention or discovery.

That said description was signed by your orator, and was attested by two witnesses, and was filed in the Patent Office. That your orator made oath before a person authorized by law to administer oaths that he did verily believe that he was the original and first inventor or discoverer of the said invention; that he did not know or believe that the same was ever before known or used, and that he was a citizen of the United States, and your orator also paid into the Treasury of the United States the sum of thirty-five dollars.

And your orator avers that copies of said letters patent so as aforesaid issued to him for a new and useful improved dredge-boat for excavating rivers, and of the statement and schedule thereto annexed, and hereto annexed, marked A. And your orator prays that the same may be taken as a part of this bill.

And your orator avers that, by virtue of the hereinbefore recited premises, he became, and is possessed of the sole and exclusive right during the period aforesaid, to make, build, construct, use, sell, and vend to others the right to make and use said invention and the thing patented, within and throughout the entire State and district of Massachusetts, and within and throughout the whole of the United States of America; and that from the date of the making and filing of said caveat, and particularly since the date of said letters patent, he has continued to be, and now is, the sole and exclusive owner of said sole and exclusive right to said invention, and to the dredge-boat for excavating rivers so patented within and throughout the said State and district of Massachusetts and throughout all of the United States, and is entitled to be protected in the enjoyment of the same.

And your orator represents unto your honor that from the peculiar nature of the invention and patent aforesaid, that the same is valuable and can be used but in few places in the United States, to wit, at the mouths of and in rivers where the current is quite rapid, at the places where earth, sand, mud, and other impediments to navigation and to the free passage of water have been formed or exist, and that at such places it is of very great value.

And your orator avers on and after the granting of said letters patent your orator was about to put the same in use, and he has well hoped to enjoy the exclusive use of the same for the purpose for which the same was granted, and to manufacture, construct, and build the same, and to derive large profits from the sale and use thereof within said district and throughout said United States of America.

And your orator avers that ever since said December 17, 1867, the said defendants, well knowing the premises and the rights and privileges of your orator as secured to him by said letters patent, and contriving to injure your orator, and deprive him of the benefits, profits, and advantages which might and otherwise would have accrued to your orator therefrom, at the city of Boston aforesaid, on the said December 17, 1867, and on divers other days and times between that day and the day of the date hereof, and of the filing hereof, and without the license or permission of your orator, and against his will, has unlawfully and wrongfully made, constructed, built, sold, used, and vended to others to be used, a dredge-boat for excavating rivers, intended to be used for excavating rivers. substantially the same as described, and for the purposes specified in the letters patent issued to the said Edwin S. Brady as aforesaid, dated December 17, 1867, and in infringement thereof. And that the said defendant has also since said December 17, 1867, and on divers days and times since then, and before the filing of this bill, and without the license or permission of your orator, and in violation of your orator's aforesaid exclusive right, and in said district of Massachusetts, made, built, and constructed a dredge-boat substantially constructed and to be used in the same manner as is described in said letters patent to your orator, and for the same purposes as are specified therein. All which your orator avers is in fraud and violation of his said sole and exclusive right to make, use, sell, and vend to others to use and sell the same.

6

And your orator avers that said defendants are now, in said district, making, building, and constructing a dredge-boat, so as aforesaid made and constructed, and intending to sell the same to others to use and selling the same to others to use. And that said defendants have received and are now receiving large gains and profits from the same, but to what amount your orator is ignorant, but he believes the same to be the full sum of thirty thousand dollars, and he so charges the fact to be, and prays that the defendants may be ordered and decreed to make a full disclosure as to the said dredge-boat, so as aforesaid built or constructed, or now being built or constructed by them or by their servants or agents, or by their orders, and of all sums of money received therefrom and thereon, and of all bargains and contracts which they have made to build and construct a dredge-boat as aforesaid, and the sums or sum which they are to receive therefor, and of all gains and profits thereon.

And your orator has requested said defendants to desist from constructing, completing, selling, or using the said patented dredge-boat, but they refused to do so.

But now, so it is, that the said defendants, combining and confederating with diverse persons, at present unknown to your orator, whose names when discovered he prays he may be at liberty to insert herein, with also words to charge them as parties defendants hereto, and contriving how to injure your orator in the premises, they, the said defendants, absolutely refuse to comply with such request.

7

And your orator avers that said defendants continue, although requested to desist from so doing, to make, build and construct, sell and use said invention of your orator, in violations of said letters patent and in infringement of said invention, and still threaten to continue the same, and have refused to pay over to your orator the aforesaid gains and profits so accruing therefrom, by means whereof the said defendants have greatly injured and continue to injure your orator, and have deprived and are continuing to deprive him, and have pre-

vented and are preventing him, from receiving the profits and gains from the exclusive use of said exclusive right to use the said invention claimed in said letters patent, which your orator otherwise, and but for the said wrongful acts of the defendants, would have obtained and received.

And your orator prays that the said defendants may be compelled by a decree of this court to render an account of the dredge boat so as aforesaid built and constructed, or now being built and constructed, by the defendants, or their agents or servants, and of all sums of money received therefor and thereon, and of all sums which they have bargained to receive therefor, and the gains and profits thereon, and that they pay over to your orator all such gains and profits received as aforesaid, and all such gains and profits as your orator would have received but for the unlawful and wrongful acts and doings of the defendants as hereinbefore set forth, and also that the said defendants, their attorneys, solicitors, servants, agents, and workmen, may be perpetually enjoined and restrained by a decree and injunction of this court from directly or indirectly making, constructing, or using, or selling, or causing to be sold to others, in any manner whatever, any dredge boat, in any manner or form embodying the invention described and claimed in said letters patent, the exclusive right to which, throughout the United States, now belongs to your orator in manner aforesaid, and from infringing upon or violating your orator's said patent in respect to the exclusive right so as aforesaid vested in your orator, in any way or manner whatsoever; that the defendants may be decreed to pay costs of this suit, and that your orator may have such other and further relief as the equity of the case may require and to your honor seem meet.

8 And your orator prays as well for a writ of subpœna to be directed to the said Atlantic Works as also for a writ of injunction as aforesaid.

To the end, therefore, that the said defendants may, if they can, show why your orator should not have the relief herein prayed for, and may full, true, direct, and perfect answer make, according to the best of their knowledge, information, and belief, to the several matters hereinbefore averred and set forth as particularly and fully as if the same were here repeated and they were specially interrogated thereto, may it please your honor to grant unto your orator a writ of subpœna issuing out of and under the seal of this honorable court, directed to the said Atlantic Works, commanding them to appear and make answer to this bill of complaint, and to perform, stand to, and abide all such orders and decrees as to this court may seem required by equity and good conscience.

And your orator further avers and states that he is informed and believes that the said defendants have now in their possession, in Boston aforesaid, a dredge boat built and constructed in the same manner as is described and set forth in said patent and specifications, and in direct infringement thereof, which said dredge boat is now nearly or quite completed and is of great value; your orator does not know the exact sum, but believes the same to be at least one hundred thousand dollars.

And your orator avers that he is informed and believes that said defendants are about to sell said dredge boat, or are about to send away out of this district to be sold the said dredge boat, to the great loss, damage, and injury of your orator. Therefore,

May it please your honor to grant to your orator a provisional or

preliminary injunction issuing out of and under the seal of this honorable court, enjoining and restraining the said defendants, their attorneys, solicitors, servants, and agents, and workmen, to the same purpose, tenor, object, and effect as hereinbefore prayed for in regard to said perpetual injunction, and especially from removing or authorizing any other person to remove said dredge boat from said Boston and from said district, until a hearing shall have been had by this honorable court upon the matters and things herein stated and set forth.

And your orator will ever pray, &c.

EDWIN L. BRADY.

STILLMAN B. ALLEN,
Complainant's Solicitor.

UNITED STATES OF AMERICA,
District of Massachusetts, ss:

On this ninth day of April, A. D. 1868, before me came Edwin L. Brady, the plaintiff in the foregoing bill of complaint, and who signed the same, and he, being by me duly sworn, did depose and say that he had read and knew the contents of the said bill, and that the statements therein contained stated as of his own knowledge are true, and that those therein contained stated as of his information, recollection, or belief are true according to the best of his information, recollection, and belief.

And that same Edwin L. Brady did further depose and say that he was the original and first inventor of said dredge boat, described and claimed in the schedule or specification in said bill named as annexed to said letters patent granted to said Brady, dated December 17, 1867, for a dredge boat for excavating rivers.

Sworn before me this ninth April, 1868.

JOHN J. STETSON,
Clerk U. S. Circuit Court.

A.

The United States of America to all to whom these letters patent shall come:

Whereas Edwin L. Brady, of New Orleans, Louisiana, has alleged that he has invented a new and useful improved dredge boat, for excavating rivers, and has made oath that he is a citizen of the United States, that he verily believes he is the original and first inventor or discoverer of the said invention, and that the same hath not to his knowledge and belief been previously known or used, has paid into the Treasury of the United States the sum of thirty-five dollars, and presented a petition to the Commissioner of Patents praying that a patent may be issued therefor:

These are therefore to grant to the said Edwin L. Brady, his executors, administrators, or assigns, for the term of seventeen years from the seventeenth day of December, one thousand eight hundred and
10 sixty-seven, the full and exclusive right and liberty of making, using and vending to others to be used, the said invention, a description whereof is given in the annexed schedule and made a part of these presents.

In testimony whereof I have caused these letters to be made patent and the seal of the Patent Office to be hereunto affixed.

Given under my hand at the city of Washington, this seventeenth

day of December, in the year of our Lord one thousand eight hundred and sixty-seven, and of the Independence of the United States of America the ninety-second.

W. T. OTTO,
Acting Secretary of the Interior.
T. C. THATCHER,
Commissioner of Patents.

Contersigned and sealed with the seal of the Patent Office.

The schedule referred to in these letters patent, and making part of the same.

UNITED STATES PATENT OFFICE.

Edwin L. Brady, of New Orleans, Louisiana, letters patent No. 72360, dated December 17th, 1867. Improved dredge boat for excavating rivers. The schedule referred to in these letters patent, and making part of the same.

To all whom it may concern:

Be it known that I, Edwin L. Brady, of New Orleans, in the parish of Orleans and State of Louisiana, have invented a new and useful improvement in boats for dredging under water; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings making part of their specifications, in which—

Figure 1 is a vertical longitudinal section, and

Figure 2 is a horizontal section.

The same letters are employed for the designation of the same parts in both figures.

The excavator consists of a strong boat, propelled by one or two propellors placed in the stern of the boat. I prefer two propellers, as affording greater power and rendering the boat more manageable in
11 steering in crooked channels. This propeller is drawn in the ordinary manner, by steam engines of ordinary construction. Near the bow of the boat I place another steam engine, driving what I call the "mud fan," which projects from and in front of the bow of the boat. This is formed by a set of revolving blades shown at A, turned like the propellers, by a shaft passing through a stuffing-box, D. The blades are shaped somewhat like those of a propeller, but they are sharper on their fronts and less inclined on their faces. These blades should extend, say, two feet below the bottom of the boat, and their object is by their rapid revolution to displace the sand and mud on the bottom, and stirring them up, to mix them with the water so that they may be carried off by the current.

The motion of the "mud fan" tends to draw forward the boat, assisting the propellers.

All the engines may be driven by one set of boilers, F, placed midships. In order that the "mud fan" may be brought in contact with the bottom, I construct the boat with a series of water-tight compartments, E, placed in the bow and stern, and on each side of the centre amidships, into which the water may be permitted to flow through pipes so as to sink the vessel to the required depth; the compartments being so placed and proportioned that the vessel shall sink with an even keel, by which the effective action of the "mud-fan," the propellers, and the

steering apparatus is preserved, the boat being manageable at any depth. A large pump, B, driven by the engine, is connected by pipes with all the compartments, so that the water may be pumped out when necessary to raise the boat.

I am aware that boats have been constructed with compartments to be filled with water, to sink the dredging mechanism to the bottom, by loading the end of the boat in which such mechanism is placed; but this construction is subject to the disadvantage of requiring more complicated machinery for dredging, in order that it may be accommodated to the inclination of the boat, and to the further disadvantage that the boats thus inclined are comparatively unmanageable.

What I claim as my invention, and desire to secure by letters patent, is:

1. A dredging boat, constructed with a series of water-tight compartments, so proportioned and arranged that, as they are filled
12 with water, the boat shall preserve an even keel and the dredging mechanism be brought into action without any adjusting devices, substantially as set forth.

2. The combination of the "mud fan" attached to a rigid shaft, and a boat containing a series of water-tight compartments, E, so adjusted as to cause the boat to settle on an even keel as the compartments are filled with water, and a pump, B, for exhausting the water from all the compartments, substantially as set forth.

EDWIN L. BRADY.

Witnesses:
R. MASON.
L. MURPHY.

This cause was thence continued from term to term to the October term of this court, A. D. 1868, when the following answer was filed, namely:

Answer.—Filed by consent, March 15, 1869.

To the honorable the judges of the circuit court of the United States within and for the district of Massachusetts, sitting in equity:

The answer of the Atlantic Works, a corporation duly established under and by virtue of the laws of the State of Massachusetts, respondents, to the bill of complaint of Edwin L. Brady, of Stamford, in the State of Connecticut, complainant.

These defendants, now and at all times hereafter saving and reserving to themselves all and all manner of exceptions to the said complainant's bill of complaint for the manifold errors, imperfections, omissions, and defects therein, for answer thereto, or to so much thereof as they are advised that it is material for them to make answer unto, answering, say:

First. That they do not know, except as they are informed by the said bill of complaint, and as hereinafter stated, whether or not the said complainant filed his caveat in the office of the Commissioner of Patents of the said United States, or made due application for a patent
13 as therein alleged, or whether or not a patent in due form of law was issued to him, as alleged in said bill, or for what pretended or alleged new or useful invention or improvement the said alleged patent, if any, was issued, or whether the said complainant was the

original or first inventor thereof, if any such was made. These defendants do not, however, admit the same or any of said allegations in this behalf in said bill, but leave the complainant to make such proof thereof as he may be advised and see fit and this honorable court may require; and these defendants deny, on information and belief, as hereinafter is more fully set forth, that the complainant is the original or first inventor of any dredge boat, as alleged in said bill, or that he has any valid patent therefor.

Second. And these defendants, further answering, say that they have, as they have above stated, no knowledge or information other than that derived from the said complainant's bill, and as hereinafter stated, of the issuing of any patent to the said complainant, or of the alleged invention or improvement sought or claimed to be patented or secured thereby; but upon information and belief they deny, as hereinafter stated, that the said complainant has any valid patent, as alleged in said bill, and deny that they have ever in any manner infringed, or violated any valid patent of the complainant's, or any part thereof, or any rights of the complainant therein or thereunder. And these defendants, answering further, deny that they ever, in any manner, knowingly or intentionally, violated or infringed in any particular, any patent of the said complainant, or any rights secured to him under and by virtue of any patent of the said complainant, or any rights secured to him under and by virtue of any patent, or ever wrongfully used any invention or improvement of the said complainant, or any part of any such invention or improvement.

Third. And these defendants, further answering, say that in the month of October, A. D. 1867, the Government of the United States advertised for proposals for building a dredge boat for the mouth of the Mississippi River, according to certain plans and specifications to be furnished by the said government; that these defendants are manufacturers and builders of marine engines and steamboats, and that they examined the government's plans and specifications for said boat, and made their proposals for building the same in accordance there-
14 with; that their proposals were accepted on or before the fifteenth day of said October, and that they thereupon at once began the construction of said boat, and built and completed the same under the inspection and supervision of a United States officer, according to the said plans and specifications, and that said boat was completed in conformity with the said plans and specifications of the said United States Government, and went in charge of the said officer to the mouth of the Mississippi River; that the plans and specifications for the construction of said boat were, as these defendants are informed and thereupon aver, made and furnished by Brevet Brigadier-General M. D. McAlester, of the Engineer Corps of the United States, for the use of the Government of the United States, were the result of his own study, observation, and experience, and that so far as they were original in any particular, he was the author and inventor thereof. And these defendants say that, in building the said boat and in following therein the said plans and specifications, they were the mere agents and executive hands of the Government of the United States, and that the said government was the real constructor of said boat, all the work thereon being done, as hereinbefore stated, under the immediate supervision and in obedience to the orders of the Government of the United States, and in conformity with the plans, specifications, and directions which the said government furnished.

Fourth. And these defendants, further answering, say that they have

been informed, and thereupon aver, that the plans and specifications by which the said dredge boat was constructed were not, and the said dredge boat itself was not, a new invention, or novel and original; but the same and the principle of said dredge boat had been substantially known and publicly used before, to wit, at New Orleans, on the mouth of the Mississippi River, in the year 1864, in the steam dredge boat Enoch Train, and had also been used and applied in the construction of the light-draft monitors, so called, built by the United States Government during the late rebellion, and long prior to the alleged patent or invention of the said Brady and the dates of his said patent or caveat, and one of which said light-draft monitors was built at the works of these defendants.

Fifth. And these defendants, further answering, say that they have been informed and thereupon aver that at some time in the years of
15 1866 and 1867, and prior to the date of the alleged invention of the said Brady, he, the said Brady, was employed and engaged as the agent of one Horace Tyler, who had then a contract with the Government of the United States for the improvement of the mouth of the Mississippi River; that the said M. D. McAlester, a brevet brigadier-general of the Army of the United States, and an officer of the Engineer Corps of said army, was then stationed at the city of New Orleans to supervise and inspect, on behalf of the United States, the execution of said contract, and he, the said Brady, was, as hereinbefore stated, the agent and representative of the said contractor, and was then fitting and preparing, at said New Orleans, a steamboat for the purpose of carrying out the said contract, upon a plan wholly distinct from that of the alleged invention of said Brady, described and claimed in said patent, and the said McAlester, while the said Brady was so engaged as aforesaid, and fitting said boat, and before the claim and application of said Brady for a patent, and before the date of his alleged invention or caveat, detailed, described, and developed to him a plan for a dredge boat identical in plan and contrivance with the said dredge boat so constructed, as aforesaid, at the works of the defendants, and which plan the said McAlester, before the date of the alleged invention of the said Brady, and before the filing of the said caveat, had communicated to the Bureau of Engineers of the Army of the United States. And the said steamboat so fitted by the said Brady, as the agent for said Tyler, for improving the said mouth of the Mississippi River, thereafter, upon the trial of the same, failed to accomplish the purpose for which it was prepared and fitted as aforesaid, and proved wholly useless, and the said plan of improving the mouth of the said Mississippi River by said steamboat was abandoned and the said contract annulled. And the said Brady, when he saw that the said boat could not succeed, made drawings for a dredge boat on the plan developed and described to him by the said McAlester, as aforesaid, and afterwards described himself as, and claimed to be, the inventor and originator of the said plan and invention for a dredge boat, and made application for a patent therefor, and informed these respondents, after the date of the acceptance of their said proposals by the United States, and after the work had been begun on the said dredge boat constructed at the works of
16 your respondents, as aforesaid, upon the plans and specifications furnished by the Government of the United States, and under the supervision of an officer of the said government, as aforesaid, and when the said dredge boat was partly completed, that the said patent had issued to him, and then notified your respondents that he claimed that the said dredge boat was an infringement of his said pat-

ent. And your respondents say that they have been advised and informed, and thereupon aver, that the said Brady was not the inventor of the said invention claimed by said patent; that his application for said patent and his claim to be the original inventor of the said dredge boat is not founded in fact; that the facts in reference thereto are as hereinbefore set forth by these respondents, and that the said M. D. McAlester was the sole inventor thereof, and showed and described the same to the said Brady, and that the said Brady, well knowing the facts and the premises above set out, and that he was not the first and original inventor of said dredge boat, fraudulently and wrongfully and falsely represented himself as such inventor, and claimed a patent therefor, and that said patent was wrongfully and inadvertently issued in ignorance of the aforesaid facts, and is, therefore, wholly inoperative and void.

And these respondents deny all and all manner of combinations and conspiracy wherewith they are by the said bill charged; without this, that any other matter, cause, or thing in the complainant's said bill of complaint contained, material or necessary for these defendants to make answer unto, and not herein and hereby well and sufficiently answered, confessed, traversed, and avoided, or denied, is true to the knowledge or belief of these respondents. All which matters and things these respondents are ready and willing to aver, maintain, and prove, as this honorable court shall direct; and humbly pray to be hence dismissed with their reasonable costs and charges in this behalf most wrongfully sustained.

FRANKLIN W. SMITH,
Treasurer of the Atlantic Works.

T. K. LOTHROP,
Solicitor for Respondents.

17 UNITED STATES OF AMERICA,
District of Massachusetts, ss:

I, Franklin W. Smith, treasurer of the Atlantic Works, respondents in the above suit, do solemnly depose and say that the foregoing answer, and the matters therein set forth, are true of my own knowledge, except so far as they are stated to be on information and belief; and that as to the statements therein contained and set forth as made on information and belief, I believe them to be true.

Subscribed and sworn to this fifteenth day of March, A. D. 1869, before me.

JOHN G. STETSON,
Clerk U. S. Circuit Court.

And at the same term the following replication was filed, namely:

Replication.—Filed by consent, April 5, 1869.

This repliant, saving and reserving unto himself all and all manner of advantage of exception to the manifold insufficiencies of the said answer, for replication thereunto saith that he will aver and prove his said bill to be true, certain, and sufficient in the law to be answered unto, and that the said answer of the said defendant is uncertain, untrue, and insufficient to be replied to by this repliant; without this, that any other matter or thing whatsoever in the said answer contained, material or effectual in the law to be replied unto, confessed, and avoided, traversed or denied, is true; all which matters and things this

repliant is and will be ready to aver and prove as this honorable court shall direct, and humbly prays as in and by his said bill he hath already prayed.

JOHN S. ABBOTT,
Solicitor for Complainant.

18 This cause was thence continued to the May term of this court, A. D. 1869. when the following amendment to answer was filed, namely:

Amendment to answer.—Filed by consent, August 17, 1869.

And these respondents, further answering, say that the dredge boat which the plaintiff alleges in his bill of complaint to have been built by these respondents in violation of the patent of the plaintiff, and of the rights conferred on him thereby, was, as is stated in their answer already filed in this cause, built by these respondents on behalf of the United States, upon plans and specifications furnished by the public officers and authorities of the United States, and under a contract made with the United States by the respondents, in perfect good faith, and in entire ignorance of any patent of the plaintiff, and of any claim of rights made by him thereunder; that these respondents were bound by heavy bonds to the faithful performance of their said contract with the government, and that they built the said dredge boat under this contract in accordance with the said plans furnished by the government, and delivered her, on her completion, to the government at the place and time required by their said contract, to wit, at Boston, on the sixteenth day of June, A. D. 1868. That the greater part of the work on said dredge boat was done, as well as the said contract made, in entire ignorance of any claim on the part of the plaintiff; and that the said contract was wholly terminated by the completion of the said dredge boat and its delivery to the government on the said sixteenth day of June. And the respondents, not hereby admitting that in the performance of their said contract with the United States or in the construction of the said dredge boat they did any act in violation or infringement of the said alleged patent of the plaintiff, or of any actual or pretended rights secured to or claimed by him thereunder, further answering, say that they have not, at any time since the said completion and delivery of said dredge boat built under said contract, made any contract for any similar boat, or in any way been engaged in any work of any similar kind whatsoever, or done any act in any manner possible to be considered as violating or infringing the alleged patent of the plaintiff, or any actual or pretended rights of the plaintiff under said patent; that they do not threaten, or propose, or intend, and have never
19 threatened, or proposed or intended any such violation, or any act which can be possibly construed as any violation and infringement of the alleged patent of the plaintiff, or of any rights of his thereunder. That the alleged and pretended wrongful acts of which the plaintiff complains in his bill, and which he alleges to be a violation of his rights, and for which he seeks redress by this suit were substantially done and completed before this suit was brought; that no further or other wrong is alleged in said bill to be in any manner wrong, is threatened or intended; and these respondents deny that any such wrong is threatened or intended; and they say that the said suit is really prosecuted to recover damages for a past injury, and not to prevent any real or intended, threatened, or existing injury; that the

alleged and pretended wrong and injury complained of is not therefore cognizable in, and the relief sought is one not appropriate to a court of equity, and that equity has therefore no jurisdiction of this cause. Wherefore they pray that the said bill may be dismissed, and for their cost.

FRANKLIN W. SMITH,
Treasurer Atlantic Works.

20 UNITED STATES OF AMERICA,
District of Mass.:

BOSTON, *Aug.* 3, 1869.

Personally appeared the above-named Franklin W. Smith, treasurer of the Atlantic Works, and made oath to the truth of the statements in the foregoing answer, so far as stated upon his knowledge; and so far as stated to be upon information and belief, he believes the same to be true.

Before me:

C. W. TUTTLE,
U. S. Commissioner.

This cause was thence continued from term to term to the May term of this court, A. D. 1876, when publication of the evidence was ordered and the cause was set down for hearing, and fully heard on the fourteenth day of *day of* June, A. D. 1876, before the honorable Nathan Clifford, associate justice.

Subsequently at the same term, the following amendment to answer was presented to the court for allowance, namely:

21 *Amendment to answer.—Presented for allowance July* 18, 1876.

And now come the defendants in the above-entitled cause, and, the leave of the court having been first obtained, amend their answer heretofore filed in said cause, by inserting in the fourth paragraph thereof the words and figures, and changing the date as shown in their motion to amend the same herewith filed, so that said fourth paragraph of their said answer shall read as follows:

Fourth. And these defendants, further answering, say that they have been informed and thereupon aver that the plans and specifications by which the said dredge-boat was constructed were not, and the said dredge-boat itself was not a new invention, or novel and original; but the same, and the principle of said dredge-boat, had been substantially known and publicly used before, to wit, at New Orleans, on the mouth of the Mississippi River, in the year 1859, in the steam dredge-boat Enoch Train, by Charles H. Hyde, by Thomas G. Mackie, and William A. Hyde, copartners, under the firm of Hyde & Mackie, and by Henry Wright, and had also been used and applied in the construction of light-draft monitors, so called, built by the United States Government during the late rebellion, and long prior to the alleged patent or invention of the said Brady and the dates of his said patent or
22 caveat, and one of which said light-draft monitors was built at the works of these defendants.

ATLANTIC WORKS,
By FRANKLIN W. SMITH,
Late Treasurer.

UNITED STATES OF AMERICA,
District of Massachusetts:

BOSTON, *June* 29, 1876.

Then personally appeared the above-named Franklin W. Smith, and made oath that the answer of the defendants in the above-entitled cause, as amended, is true, except so far as the statements therein are upon information and belief, and as to such statements he believes them to be true.

Before me:

FISHER AMES,
U. S. Commissioner.

And thereupon the following order of court was entered, namely:

Order of court.—July 18, 1876.

CLIFFORD, J.

Amendment to answer allowed upon payment to complainant of the following items of his taxable costs to the present time, namely:
(Taxed items here scheduled, omitted in printing, amount to $91.58.)

Cause to stand open for the complainant to take evidence in reply under the amendment to the answer, with leave to cross-examine under a commission the witnesses whose depositions were taken de bene esse, at New Orleans, La., in behalf of defendants, until Aug. 21, 1876; the additional evidence so taken to be printed by the defendants but to be taxed as costs in their favor if defendants prevail, printing to be completed by Sept. 5, 1876, and both parties to file additional briefs, if they see cause, with the clerk by Sept. 20, 1876.

By the court:

JOHN G. STETSON, *Clerk.*

JULY 27, 1876, complainant, by his attorney, acknowledges receipt of his taxable costs in conformity with the foregoing order of court.

At the same term, after due deliberation thereon had, on the twenty-ninth day of September, A. D. 1876, the opinion of the court was read by the honorable Nathan Clifford, associate justice, and thereupon the following decree was entered, namely:

23 *Decree for an account and for reference to a master.*

This cause came on to be heard at this present term, upon the pleadings and proofs, and was argued by counsel for the respective parties, and, upon consideration thereof, to wit, Sept. 29, 1876, it is ordered, adjudged, and decreed as follows, viz, that the letters patent referred to in the complainant's bill, being letters patent of the United States granted unto said Edwin L. Brady for a new and useful improvement in boats for dredging under water, dated December 17, 1867, is a good and valid patent, and that the said Edwin L. Brady was the original and first inventor of the improvement described and claimed therein, and that the said defendants have infringed the said patent, and upon the exclusive rights of the complainant under the same.

And it is further ordered, adjudged, and decreed that the complainant recover of the defendants the profits which they have received or made, or which have accrued to them from said infringement by the

manufacture, use, or sale of the improvement described, and secured by said letters patent at any and all times since the date of said letters patent.

And it is further ordered, adjudged, and decreed that it be referred to John G. Stetson, esquire, a master of this court, to take and report to the court an account of the profits which the said defendants have received, or which have arisen or accrued to them from the manufacture, use, or sale of said improvement, or from said infringement.

And it is further ordered, adjudged, and decreed that the complainant recover of the defendants his costs of suit.

By the court:

JOHN G. STETSON, *Clerk.*

24, 25 This cause was thence continued from term to term to the October term of this court, A. D. 1877, when the master to whom this cause was referred made the following report to the court, namely:

26, 27 *Master's report.—Filed April* 30, 1878.

To the honorable the judges of said circuit court:

I, John G. Stetson, the master to whom the above-entitled cause was referred by a decree of said circuit court, Sept. 29, 1876, report in print:

The proceedings before me to the submission of a draft report were as follows:

1. Oct. 23, 1876. The first meeting before me was held, counsel for both parties being present.

2. Nov. 8, 1876. The defendants filed the account returned herewith, entitled "Defendants' account" (see page 29).

3. Nov. 13, 1876. The defendants produced their books of account, vouchers, and other documents relating to the accounting, and Nelson Curtis, their agent, submitted to an examination touching all matters relating to the reference in this case.

4. Jan. 10, 1877. The complainant filed with me the papers, returned herewith, entitled "Complainant's charge" (see page 35), and "Complainant's statement accompanying charge" (see page 37).

5. Jan. 13, 1877. The defendants filed with me the papers, returned herewith, entitled "Amendment to defendants' account" (see page 42).

28 6. Jan. 15, 1877. The complainant filed with me the paper, returned herewith, entitled "Complainant's additional charge" (see page 44).

7. Feb. 15, 1877. The defendants filed with me the papers, returned herewith, entitled "Amendment to defendants' account" (see page 45), and "Defendants' discharge" (see page 48).

8. Both parties introduced evidence upon the issues raised by the aforesaid pleadings.

9. July 30, 1877. The complainant filed with me the paper, returned herewith, entitled "Amendment to complainant's charge and statement" (see page 49).

10. July 31, 1877. The defendants filed the paper, returned herewith, entitled "Amendment to defendants' account" (see page 51).

11. Aug. 1, 1877. The complainant filed the paper, returned herewith, entitled "Complainant's additional amendment" (see page 52.)

12. Aug. 20, 1877. The defendants filed the paper, returned herewith, entitled "Amendment to defendants' account and pleadings" (see page 52).

13. All the aforesaid papers were allowed to be filed by me, and the parties were fully heard upon all questions arising thereon and upon the evidence introduced before me.

The complainant was represented throughout the proceedings before me by John S. Abbott, esq. Robert R. Bishop, esq., of the firm of Lothrop, Bishop & Lincoln, counselors, was present on behalf of defendants during the earlier proceedings before me, but on the 21st day of December, 1876, Hon. George P. Sanger, attorney of the United States for this district, appeared, and from that time the proceedings were conducted on the part of the defendants by Judge Sanger and Mr. Bishop, jointly.

The pleadings above referred to are as follows:

29 *Defendants' account.—Filed Nov.* 8, 1876.

And now come the Atlantic Works, defendants in the above-entitled cause, and file the account hereto annexed as an account of receipts and expenditures for account of the construction of the dredge-boat Essayons by them. But said account does not show any deduction from the total receipts of any sum for interest on the capital employed by them in the construction of said boat; nor can they, in season to file this account at the time stipulated, state what sum such interest would be; but they reserve and claim the right hereafter to amend said account by stating said sum and deducting the same from the balance. The Exhibit A annexed to said account is a literal transcript of the accounts of the company made at the time of the construction of said boat.

ATLANTIC WORKS,
By NELSON CURTIS, *Agent.*

The Atlantic Works in account with the steam dredge-boat Essayons, Dr

1868.					
Mar. 16.	To cash	$50,000	00	(1)	
April 20.	" "	39,200	00	(2)	
June 23.	" "	78,050	00	(3)	
Aug. 14.	" "	55,750	00	(4)	
1869.					
Jan'y 2.	" "	459	01	(5)	
" 7.	" "	606	20	(6)	
				$224,065	21 (7)

Cr.

By cost of machinery, as per detailed statement A, hereto annexed		$82,174	63	(8)	
"	boilers, chimneys, &c., do	37,144	43	(9)	
"	bulkheads, do	1,179	60	(10)	
"	hull, do	66,200	24	(11)	
"	miscellaneous items, do	35,530	24	(12)	
				$222,229	14 (13)
Profit, without deduction for interest upon capital				$1,836	07 (14)
				$224,065	21 (15)

30 A.

U. S. dredge-boat Essayons.—Machinery.—Material.

Iron castings,	232,644 lbs..	$13,211	94	(16)
Composition castings,	34,148½ " ..	10,587	35	(17)
Purchased forgings,	54,249 " ..	3,047	76	(18)
Manufactured forgings,	43,320 " ..	2,357	45	(19)
Refined iron,	1,680 " ..	90	21	(20)
Plate iron,	6,094 " ..	292	29	(21)
Rivets,	364 " ..	27	41	(22)
Brass tubes,	19 " ..	7	22	(23)
Condenser tubes,	8,009 " ..	4,004	50	(24)
Copper piping, &c.,	8,346 " ..	3,896	21	(25)
Bolts, nuts, &c.,	1,239 " ..	244	57	(26)
Metals,	5,336 " ..	1,475	15	(27)
Pattern stock, 5,652 feet,	..	420	54	(28)
Lumber, 955 "	..	25	73	(29)
Piping, &c.,	..	879	02	(30)
Freight, teaming, &c.,	..	778	18	(31)
Moving heavy pieces,	..	75	00	(32)
Instruments,	..	886	51	(33)
Paints, oils, &c.	..	163	13	(34)
Rubber materials,	..	184	19	(35)
Scouring,	..	62	50	(36)
Riggers' labor, putting machinery on board,	..	602	51	(37)
Tracings,	..	19	50	(38)
Traveling expenses,	..	40	00	(39)
Lignum vitæ,	..	22	83	(40)
Gear cutting,	..	9	63	(41)
Detail drawing,	..	596	70	(42)
Geriche pumps,	1,787 lbs..	2,275	00	(43)
Waste, packing, &c.,		44	62	(44)
Steam winch,	1,720 " ..	712	50	(45)
Donkey pump,	800 " ..	435	70	(46)
Felting,		207	00	(47)
Ruddick engines,	5,500 " ..	3,000	00	(48)
31 Pattern work,		$13	02	(49)
Patent fees on condenser,		745	20	(50)
Wood packings,		140	00	(51)
Repairs at New Orleans,		46	00	(52)
Sundry expenses,		6	95	(53)
	405,275½ lbs.			$51,634 02 (54)

Labor.

Machine-shop,	49,502½ hours....	$12,845	97	(55)
Smiths' "	9,714¼ "	2,128	09	(56)
Drawing "	2,245 "	1,039	84	(57)
Pattern "	6,653¼ "	2,339	72	(58)
Boiler "	1,498 "	375	37	(59)
Contracts	668 "	688	75	(60)
	70,281 "			$19,415 42 (61)
Total weight and cost of machinery without general expenses				$71,049 44 (62)

Boilers, chimneys, &c.—Material—net cost.

Iron castings,	20,281	lbs..	$1,047 41	(63)
Forgings,	4,260	" ..	209 82	(64)
Refined iron,	42,158	" ..	1,791 70	(65)
T and angle iron,	12,842	" ..	734 52	(66)
Ventilators,	1,140	" ..	228 00	(67)
Plate iron,	121,842	" ..	7,485 01	(68)
Rivets,	12,002½	" ..	948 41	(69)
Tubes,	29,340	" ..	3,384 21	(70)
Copper piping,		..	9 00	(71)
Bolts and nuts,	1,233	" ..	201 52	(72)
Pattern stock, 37 feet,		..	2 84	(73)
Piping,		..	50 00	(74)
Freight, teaming, &c.,		..	111 37	(75)
Paints, oils, &c.,		..	39 50	(76)
Rubber materials,		..	18 36	(77)
32 Moving heavy pieces,		..	$145 50	(78)
Scouring,		..	125 00	(79)
Riggers' bill, putting boilers on board,		..	283 06	(80)
Tracings,		..	10 00	(81)
Traveling expenses,		..	25 00	(82)
Lime, cement, &c.,		..	118 90	(83)
Felting, &c.,		..	554 25	(84)
Inspecting and testing,		..	40 00	(85)
Chain to chimney,	673	lbs..	77 40	(86)
E. J. Morris' contract,		..	5,330 92	(87)
Sheet lead,	4,846½	" ..	785 75	(88)
	250,618	"		$23,757 45 (89

Labor—net cost.

Machine-shop	1,046¾	hours.....	$272 73	(90)
Smiths' "	1,422½	"	309 87	(91)
Drawing "	290	"	149 66	(92)
Pattern "	116	"	41 57	(93)
Boiler "	33,381¼	"	6,855 16	(94)
		"		
	36,256½	"		$7,628 99 (95)
				$31,386 44 (96)

Bulkheads.—Material—net cost.

Iron castings,	917	lbs....	$45 85	(97)
Forgings,	194	"	11 64	(98)
T and angle iron,	1,638	"	91 41	(99)
Plate iron,	8,752	"	454 11	(100)
Rivets,	554	"	33 18	(101)
Bolts, nuts, &c.,	345½	"	43 38	(102)
Freight, teaming, &c.,		....	50	(103)
Paints, oils, &c.,		....	5 40	(104)
Felting,		....	6 00	(105)
Riggers' bill,		....	90 00	(106)
	12,400½	"	Net cost	$781 47 (107)

33 *Labor.*

Machine-shop	15	hours.	
Smiths' "	44	"	
Pattern "	13	"	
Boiler "	1,184½	"	
	1,256½	"	$256 76 (108)
			$1,038 23 (109)

Net cost of miscellaneous charges.

Iron castings,	14,154 lbs.		$707 70 (110)
Composition castings,	33¾ "		19 24 (111)
Forgings,	1,936 "		106 70 (112)
T and angle iron,	407 "		20 35 (113)
Plate iron,	2,474 "		135 25 (114)
Rivets,	48 "		2 96 (115)
Copper pipings,			4 50 (116)
Bolts, nuts, &c.,	187 "		52 76 (117)
Freight, teaming, &c.,			140 75 (118)
Towage and pilotage,			313 59 (119)
Insurance,			4,541 50 (120)
Paints, oils, &c.,			385 03 (121)
Rubber materials,	6½ "		10 76 (122)
Outfit, stores, &c.,			1,490 70 (123)
Commissions,			5,575 00 (124)
Ballast,			966 41 (125)
Coal,			2,536 10 (126)
Voyage,			7,824 31 (127)
Dockage and wharfage,			770 30 (128)
Hull,			66,200 24 (129)
Rigging,			757 10 (130)
U. S. excise tax,			446 00 (131)
Mason work,			95 00 (132)
Traveling and other expenses,			190 08 (133)
	19,246¼ "		$93,292 33 (134)

34 *Labor.*

Machine-shop,	708	hours	$180 13 (131)	
Smiths' "	166½	"	36 27 (136)	
Pattern "	9	"	3 18 (137)	
Boiler "	718¼	"	174 70 (138)	
setting up,	264	"	58 98 (139)	
Machine, "	13,901	"	3,567 89 (140)	
Ship-keeper,	522	"	134 57 (141)	
	16,289½	"		$4,155 72 (142)
				$97,448 05 (143)

RECAPITULATION.

Net cost of machinery	$71,049 44 (144)		
" boilers, &c	31,386 44 (145)		
" bulkheads	1,038 23 (146)		
" miscellaneous	97,448 05 (147)		
		$200,922 16	(148)
General expenses for 1867, 25.6 %	$6,250 28 (148*a*)		
" " " 1868, 13.628 %	15,056 70 (148*b*)	21,306 98	(149)
Total cost		$222,229 14	(150)
No general expenses reckoned on hull, $66,000			(151)

Weights.

Rough weight of machinery	405,275½	lbs.	(152)
Finished " "	354,556		(153)
Less 11½ %	50,719½	"	(154)
Cost per lb., without general expenses, 20 cents.			(155)
" " with " " 23 "			(156)
Rough weight of boilers	250,618	lbs.	(157)
Finished " "	232,298	"	(158)
Less 7 $\frac{3}{10}$*ths* %	18,320		(159)
Cost per lb., without general expenses, 13½ cents.			(160)
" " with " " 16 "			(161)
35 Rough weight of bulkheads	12,400½	lbs.	(162)
Finished " "	11,022		(163)
Less 11 $\frac{1}{10}$*th* %	1,378½	"	(164)
Cost per lb. without general expenses, 9$\frac{2}{3}$ cents.			(165)
" " with " " 10$\frac{3}{4}$ "			(166)
Rough weight of miscellaneous	19,246½		(167)
Finished " "	18,200		(168)
Less 5½ %	1,046½		(169)
Total rough weight	668,294	lbs.	(170)
" finished "	597,876	"	(171)
Less 10½ %	70,418	"	(172)

Miscellaneous, not included.

Complainant's charge.—Filed Jan. 10, 1877.

Account showing profits derived by defendants and for which they are chargeable as claimed by complainant.

The defendants are chargeable with—

1868. March 16. Cash received		$50,000 00	(173)
" April 20. " "		39,200 00	(174)
" June 23. " "		78,050 00	(175)
" Aug. 14. " "		55,750 00	(176)
1869. Jan. 2. " "		459 01	(177)
" " 7. " "		606 20	(178)
Value of patterns and drawings		150 00	(179)
		$224,215 21	(180)

And the complainant charges that there should be allowed the defendants and deducted from the above the following sums only, viz, the several items claimed as credits in the account filed by the defendants on the 8th of November, amounting, as aggregated on
36 the second page of said account, to $222,229.14, after deducting from the last-named sum the following items:

½ ("E. J. Moore's contract, $5,330.92")	$2,665 46	(181)
"Commissions"	5,575 00	(182)
"Ballast"	966 41	(183)
Charges for "extra work"	2,000 00	(184)
And on account of overcharge for outfit, stores, &c., coal, and voyage, amounting to $11,851.11, as charged in defendants' account, say	5,000 00	(185)
	$16,206 87	(186)

In addition to the above deductions from the sums the defendants claim to be allowed in their said account, the amount claimed as "general expenses" for 1867 and 1868, aggregating $21,306.98, should be disallowed, and in lieu thereof the sum named below should be substituted.

The "detailed statement of general expenses for 1867," filed by defendants, and marked E, gives the amount as $46,762.80; from this sum should be deducted $27,578.07, as per statement herewith submitted, leaving $19,184.73 as the amount of general expenses for the whole year. For the last two and a half months of 1867 it would be $3,996.82, $\frac{33}{124}$*ths* of which being $1,063.67, is the proper proportion of "general expenses" for 1867 which should enter into the dredge-boat account, instead of $6,250.28, as claimed by defendants in theis said account.

As to the year 1868, it appears that the dredge-boat was completed substantially on the 30th of June; and it appears from the detailed statement of "general expenses," filed by defendants with the master, and marked "*e*," that the whole amount of "general expenses" for the year, as there stated, was $53,047.07; from this sum should be deducted $29,265.13, leaving for the aggregate amount of "general expenses" for the year, $23,781.94, and for the first half of the year, $11,890.97, of which sum $\frac{33}{62}$*ds*, being $6,329.06, should be allowed as "general expenses," instead of $15,056.70, as claimed by defendants in the account filed by them.

37 RESUMÉ.

Total receipts for building and delivering dredge-boat, including value of patterns and drawings on hand		$224,215 21	(187)
Cost of labor, materials, &c., in its construction and delivery at New Orleans, exclusive of general expenses, so called	$184,715 29	(188)	
"General expenses" for 1867	1,063 67	(189)	
" " " 1868	6,329 06	(190)	
		$192,108 02	(191)
Leaving as profits		$32,107 19	(192)

For which sum the complainant charges that the defendants should account, together with interest thereon from the time the same was received by them.

Boston, January 10, 1877.

EDWIN L. BRADY,
By his solicitor, JOHN S. ABBOTT.

Complainant's statement accompanying charge.—Filed Jan. 10, 1877.

And now the said Brady, by his solicitor, John S. Abbott, after having carefully examined the account of defendants filed with the master November 8, 1876, and other documents and statements submitted to the master, claims and charges that the accounts so submitted should not be adopted by the master as showing the profits derived by the defendants from the construction of the infringing dredge boat called the Essayons.

He admits that the statement as to the sums received by the defendant for the construction of the boat, amounting to $224,065.21, is correct, but he charges that to this sum there should be added at least
38 $150.00 on account of, or as the value of, the patterns and plans used in the construction of the Essayons and retained by the defendants.

As to the several items stated in said account as cost of materials and labor, and other expenses incurred specifically in the construction of said dredge boat, the complainant claims and charges that the following items should be disallowed or modified, viz:

"E. J. Moore's contract	$5,330 92"	(193)
This item should be expunged or allowed only in part, say one-half.		
"Commissions	$5,575 00"	(194)
This should be wholly disallowed.		
"Ballast	$966 41"	(195)
This item should be expunged or allowed only in part.		
"Outfit, stores, &c	$1,490 70"	(196)
"Coal	2,536 10"	(197)
"Voyage	7,824 31"	(198)
	"$11,851 11"	(198*a*)

The complainant charges that the above is an unreasonable amount to have been incurred in sending the dredge-boat to New Orleans, and that only so much of said sum of $11,851.11 should be allowed as shall be proved to have been actually and properly incurred, or as would be reasonable for delivering the dredge-boat at New Orleans.

The complainant further charges that the sums, amounting to $2,000, or thereabouts, claimed by the defendants on account of extra work which they were not employed to do, and payment of which was refused, should be disallowed.

As to items—

General expenses for 1867, 25.06 %	$6,250 28		(199)
" " " 1868, 13.628 %	15,056 70		(200)
		$21,306 98	(201)

the complainant claims and charges that the principle or mode adopted by the defendants in arriving at these sums is radically erroneous. And the complainant claims that, as to such general expenses

as should be borne in part by the Essayons, the only time
39 to be included should be that which was embraced between the commencement and the termination of the work actually done upon the Essayons; and that such part of general expenses incurred during that period as should properly be apportioned upon different jobs of work should be charged to or enter the account with the Essayons as would bear the same proportion to the total amount of such general expenses as the amount of time expended upon the Essayons bears to the total amount of time expended by the defendants on all its jobs or work during the same period.

As to the year 1867, it appears from the statement of the defendants' agent before the master that it may be impracticable to ascertain the amount, even approximately. As to the year 1868, it can be determined by the book in the hands of the master.

It appears by that book that the Essayons was practically finished on the 30th June, 1869. As to that year no part of "general expenses" should enter into the account of the Essayons excepting what was actually incurred between the 1st of January and 30th June, inclusive.

It appears from that book that during this period the number of hours' work upon the Essayons was 99,000, or thereabouts, and upon all other jobs, 87,000, or thereabouts, aggregating 186,000. And the complainant charges that only 33-62 of such general expenses as were incurred during that period, and as should be properly included, should enter into the account of the Essayons.

As to the year 1867, it appears that the defendants commenced work upon the dredge-boat on or soon after the 15th October, being the date of their contract; and during the remainder of the year the hours of labor expended on the work were 24,950. From the books and documents furnished by the defendants, the number of hours expended by the defendants upon the work during the same time cannot be ascertained. But it is reasonable to conclude, and the complainant accordingly charges, that during that period the hours expended on the Essayons could not have borne a larger proportion to the whole number of hours expended by the defendants during the same time than as 33 to 124, and that it will be unreasonable to allow the
40 defendants in their account with the dredge-boat more than 33-124 of such general expenses during the last two and a half months of 1867 as are properly to be included under the head of general expenses.

The complainant further claims and charges that in the detailed statements of general charges furnished by the defendants, are many items which are improperly included and should be expunged, and he specifies the following:

In the general expense of 1867:

Bolts, nuts, &c	$409 97	(202)
Hardware, brushes, tinware, &c	388 40	(203)
Traveling expenses	595 51	(204)
Insurance on buildings and tools	4,277 50	(205)
City tax	510 10	(206)
City, State, and county tax	1,850 70	(207)
Tax on Gleadon	34 88	(208)
Rent " "	1,050 00	(209)
Lumber	540 04	(210)
Stationery, papers, &c	702 09	(211)
Advertising	1,053 94	(212)

Attorney's fees	81 10	(213)
Picture steamer Voyageur	15 00	(214)
Pattern work	30 36	(215)
½ expense on government work, M. & A	250 00	(216)
Depreciation on tools	3,038 21	(217)
Draftsmen	1,273 49	(218)
Pattern makers	759 34	(219)
" "	52 67	(220)
" "	97 06	(221)
Salaries, $10,717.71, less $150.00	10,567 71	(222)
	$27,578 07	(223)

In the general expenses for 1868 the following items should be expunged:

Office rent	$454 30	(224)
Bolts, nuts, &c	468 94	(225)
Books, papers, &c	118 28	(226)
41 Advertising	$240 20	(227)
Traveling expenses	383 15	(228)
State tax	425 08	(229)
State, city, and county tax	1,446 68	(230)
Revenue and postage stamps	156 29	(231)
Insurance, $4,572.50, less $75.00	4,497 50	(232)
Stationery, &c	1,113 46	(233)
Glendon tax	36 90	(234)
Pattern work, &c	60 80	(235)
Attorney's fees, &c	93 61	(236)
Subscription and Merch. Ex. Board of Trade	40 00	(237)
New office furniture	658 53	(238)
Depreciation of tools	2,858 40	(239)
Chromo	654 94	(240)
Horses and carriages	365 00	(241)
Pattern makers	638 94	(242)
Glendon	544 10	(243)
Pattern makers	110 37	(244)
Glendon	2,862 00	(245)
Salaries	11,037 66	(246)
	$29,265 13	

The claim for interest on the capital, added to the account filed by the defendants Nov. 8, 1876, should also be disallowed.

And the defendants should be charged with interest on profits from the time of their reception.

The complainant files with the master a statement herewith of receipts by the defendants on account of said dredge-boat, the whole amount of expenditures and charges on account of its construction and of its delivery at New Orleans, and a statement of such part of "general expenses," so called, as he claims and charges should enter into the dredge-boat account.

EDWIN L. BRADY,
By his solicitor, JOHN S. ABBOTT.

42 *Amendment to defendants' account.—Filed Jan.* 13, 1877.

And now come the defendants in the above-entitled cause, and amend their account in said cause heretofore filed with the master, by adding the following item to the credit side of said account, to wit:

Balance of interest upon sums of money paid out by the Atlantic Works in the construction of said dredge-boat Assayons in advance of the receipt of the payments therefor, as shown by the account hereunto annexed	$2,024 04
By adding the same to the credits shown upon said account	$222,229 14
	$224,253 18

By striking out the balance of profits of $1,836.07, as shown by said account, and substituting in place thereof the following item:

Balance of loss	$187 97

ATLANTIC WORKS,
By LOTHROP, BISHOP & LINCOLN,
Their Attorneys.

Dredge boat.

Dec. 15, '67, charges		$34,787 23
+Int. to Mar. 16, '68, 3 mos. 1 day, @ 6 %		527 64
		$35,314 87
Jan'y 15, '68, charges	$19,587 06	
+Int. to Mar. 16, '68, 2 mos. 1 day, @ 6 %	196 17	
		$19,783 23
		$55,098 10
Feb. 15, '68, charges	$20,768 50	
+Int. to Mar. 16, '68, 1 mo. 1 day, @ 6 %	107 10	
		$20,875 60
		$75,973 70
43 Amount brought forward		$75,973 70
Mar. 15, '68, charges	$19,380 07	
+Int. to Mar. 16, 1 day, @ 6 %	3 20	
		$19,383 27
Amount due Mar. 16, '68		$95,356 97
Less cash received		35,202 14
Mar. 16, balance		$60,154 83
+Int. to April 20th, 1 mo. 4 days, @ 6 %		340 88
		$60,495 71
April 15th, charges	$12,205 15	
+Int. to April 20th, 5 days, @ 6 %	10 17	
		$12,215 32
Amount due April 20, 5 days, @ 6 %		$72,711 03
Less cash received April 20th		27,598 86

April 20th, balance		$45,112 17
+Int. to June 23d, 2 mos. 3 days, @ 6 %		473 68
		$45,585 85
May 15, charges	$20,834 82	
+Int. to June 23d, 1 mo. 8 days @ 6 %	131 99	
		$20,966 81
		$66,552 66
June 15th, charges	$20,486 09	
+Int. to June 23d, 8 days, @ 6 %	27 35	
		$20,513 44
Amount due June 23d		87,066 10
Less cash received June 23d		55,337 45
		$31,728 65
+Int. to Aug. 14, 1 mo. 21 days, @ 6 %		269 70
		$31,998 35
July 15, charges	$2,292 06	
+Int. to Aug. 14th, 29 days, @ 6 %	11 08	
		$2,303 14
		$34,301 94
44 Amount brought forward		$34,301 49
August 15, charges		8,252 83
Amount due August 15th		$42,554 32
Less cash received August 15th		40,530 28
Balance due August 15th		$2,024 05

Complainant's additional charge.—Filed Jan. 15, 1877.

Statement of complainant's counsel in regard to the defendants' amendment to their account filed with the master, of which notice was received in the afternoon of January 13, 1877.

By this amendment the defendants claim to be allowed $2,024.04 for balance of interest upon sums of money paid out by them in advance of the receipt of the payments therefor, as shown by the account annexed to their proposed amendment.

By comparing said account with their account filed November 8th, and with the other documents by them left with the master, it is apparent that the said annexed account is so grossly inaccurate that the proposed amendment should be wholly disallowed.

Among other inaccuracies, the complainant's counsel states that in the account filed November 8th, it appears that the defendants received—

March 16th, 1868	$50,000 00	
April 20th, "	29,000 00	
June 23d, "	78,050 00	
August 14th, "	55,750 00	
Aggregating		$223,000 00

and they do not claim, in their proposed amendment that there is any error in the above.

And yet in the account annexed to their proposed amendment
45 they compute interest upon the hypothesis that the payments received were as follows:

March 16th, 1868	$35,202	14
April 20th, "	27,598	86
June 23d, "	55,337	45
August 14th, "	40,530	28
Aggregating	$158,668	73

In the same account annexed to their proposed amendment they state the amount of money paid out by them in the construction of the dredge-boat, on or up to Dec. 15, '67, as being $34,787.23.

But in their profit and loss account, marked F, and by them filed with the master, they state the amount of money paid out by them in the construction of said boat up to Jan. 1, 1868, embracing sixteen days, in addition to the time up to 15th December, 1867, as being $24,374.20.

For the above reasons, and because the complainant's solicitor is unable, from any books or documents presented by the defendants, to ascertain whether there is in fact any excess of interest, and if so, how much, and because the defendants have no legal claim for such item, or for any part thereof, the complainant charges that no part of $2,024.04, named in the proposed amendment should be allowed.

JOHN S. ABBOTT,
Solicitor for Complainant.

BOSTON, *January* 13, 1877.

Amendment to defendants' account.—Filed Feb. 15, 1877.

And now comes the defendants in the above entitled cause, and say that their amendment to their account, heretofore filed Jan. 13, 1877, is erroneous in this, that interest is computed upon $34,787.23, instead of upon $30,624.48 (the correct amount of expenditures and
46 general expenses for the year 1867), and that this error arose from a misapprehension on the part of the accountant who prepared said account.

The defendants therefore come and pray for leave to correct said error by strikint out the figures $2,04.24 in said amendment and substituting therefor the figures $1,882.63; by striking out the figures $224,253.18 and substituting therefor the figures $224,111.77, and by striking out the figures $187.97 and substituting therefor the figures $46.51, and by striking out the detailed calculation of interest annexed to said amendment and substituting therefor the detailed calculation hereto annexed.

The defendants say that this calculation of interest approaches exactness as nearly as it is practicable to do in a case of so many payments at so many different dates as were made in the building of the Essayons, but that it is favorable to the complainants, if at all, rather than to the defendants, as for example, the calculation of interest upon the payments made by the defendants in the year 1867, amounting to $30,624.48, is made from the average time of Dec. 15, 1867, whereas it is clear that a majority of the payments of that year were made a considerable time prior to that date.

Interest is neither charged nor credited upon the cost of the hull. As has been heretofore stated, the defendants purchased the hull for an agreed price, payments to be made pro rata as the defendants were paid by the government; and payments for the same were so made upon the same day or the day after the defendants received payments from the government, except in one instance in which the defendants anticipated payment by the government, but they have not charged interest therefor, as, they might have done. It is obvious that, with this exception, if interest were credited and charged upon the receipts and disbursements for the hull the result would be the same.

THE ATLANTIC WORKS,
By LOTHROP, BISHOP & LINCOLN,
Their Attorneys.

47 INTEREST ACCOUNT.

DR.

Int. on $30,624.48 from Dec. 15, '67. to Oct. 15, '68, 10 mos..	$1,531 20
Int. on $19,587.06 from Jan. 15, '68, to Oct. 15, '68, 9 mos...	881 42
Int. on $21,060.54 from Feb. 15, '68, to Oct. 15, '68, 8 mos...	842 44
Int. on $19,380.07 from March 15, '68, to Oct. 15, '68, 7 mos..	678 30
Int. on $12,205.15 from April 15, '68, to Oct. 15, '68, 6 mos..	366 15
Int. on $20,834.82 from May 15, '68, to Oct. 15, '68, 5 mos...	520 88
Int. on $20,486.09 from June 15, '68, to Oct. 15, '68, 4 mos..	409 72
Int. on $2,292.06 from July 15, '68, to Oct. 15, '68, 3 mos....	34 38
Int. on $8,252.83 from Aug. 15, '68, to Oct. 15, '68, 2 mos...	82 53
Int. on $1,014.67 from Sept. 15, '68, to Oct. 15, '68, 1 mo....	5 08
Int. on $661.00 from Oct. 15, '68.....	
	$5,352 10

CR.

Int. on am't received from United States, $50,000.00, less paid Curtis & Smith, contractors for hull, $14,797.86, = $35,202.14, March 16, '68, to Oct. 15, '68, 6 mos. 29 days..	$1,226 20
Int. on am't received from United States, $39,200, less paid Curtis & Smith, contractors for hull, $11,601.14, = $27,598.86, April 20, '68, to Oct. 15, '68, 5 mos. 25 days	804 99
Amount carried forward.....	$2,031 19
48 Amount brought forward.....	$2,031 19
Int. on am't received from United States, $78,050.00, less paid Curtis & Smith, contractors for hull, $22,712.55, = $55,337.45, June 23, '68, to Oct. 15, '68, 3 mos. 22 days..	1,032 98
Int. on am't received from United States, $55,750, less paid Curtis & Smith, contractors, $15,219.72, = $40,530.28, Aug. 15, '68, to Oct. 15, '68, 2 mos	405 30
	$3,469 47

Balance in favor of Atlantic Works, $1,882.63.

Defendants' discharge.—Filed Feb. 15, 1877.

The defendants, having heretofore filed an account of their receipts

and expenditures in the construction of the dredge-boat Essayons, as preliminary to the inquiry submitted by the order of reference to the master, to wit, the question of the profits realized by the defendants in the use of the particular invention or element infringed, in the opinion of the court, by them, come, and in reply to the complainant's charge filed in said cause, say:

That they have made or received no profits, and the plaintiff is entitled to recover nothing from them by reason of the use of said patented invention in the construction of said vessel, and that no profits have arisen or accrued to the defendants from the use of said invention or improvement, or from said alleged infringement, and that its use in the construction thereof imparted no value or profit to the defendants.

a. The defendants made no profits, but suffered a loss, in the construction of the entire dredge-boat. The account filed by the defendants as preliminary to the inquiry, and as furnishing information and data upon which to base the pleadings and proofs, comprised the receipts and expenditures in the construction of the entire boat.

49 And by that account and the amendment thereof showing the interest upon the sums paid out and received by the defendants it appears that there was a loss to the defendants of $46.51, and no profit, in the construction of said boat. They aver that this is a correct statement of the receipts and expenditures properly chargeable in said account; and they deny that the deductions made by the complainant from the credit side of said account, or any of them, should be allowed.

As to the mode in which the complainant has computed the defendants' general expenses, the defendants say that it is erroneous and omits from the calculation the essential elements necessary to properly compute the same.

b. If the master shall find that any profits whatever were made by the defendants in the construction of the said boat or vessel called the Essayons, which the defendants deny, then the defendants say that the plaintiff is not entitled to such profits upon said entire boat, but only to the profits, if any, upon said alleged invention or improvement used by them in the construction thereof, and that all profits properly appertaining to any other portion of said vessel should be deducted from said entire profits; and that it is incumbent upon the plaintiff to satisfy the master that there were profits upon such alleged invention or improvement as distinct from the profits, if any, upon the remainder of the vessel.

THE ATLANTIC WORKS,
By LOTHROP, BISHOP & LINCOLN,
Their Attorneys.

Amendment to complainant's charge and statement.—Filed July 30, 1877.

On p. 35, after item 179, insert:

Amount due from the U. S. Government, for extra work in the construction of the Essayons.....	$3,316 30	(179*a*)
On p. 36, erase items 181 and 185, and change 184 to.....	2,349 89	(184*a*)

50 Plaintiff claims to be allowed item 179*a*, or items 183 and 184 as amended, but not both.

Also, on same page, change "two and a half months" to two and one-third months.

On p. 40, erase items 202, 203, 210, 215, 218, 219, 220, 221, and insert:

Postage and revenue stamps		85 92	(326)
Telegrams		18 38	(337)
Store-house		1,676 26	(328)

On pp. 40–41, erase items 225, 232, 235, 237, 241, 242, 244, and insert:

Glendon rent		150 00	(329)
Buildings		266 70	(330)
Scow account		545 48	(331)
Rent of deposit safe		23 00	(332)
Digging drain		42 03	(333)
Reimbursement to A. R. Turner		18 86	(334)
Turkeys at Thanksgiving		36 10	(335)
16″ x 42″ Eng. patterns		34 70	(336)
Sundries		26 75	(337)

All other changes which the above amendment necessitates are also to be made, so that the statement of claim on page 37 will read as follows:

Total receipts for building and delivering dredge-boat, including value of patterns and drawings on hand, and amount due for extra work		$227,531 51	(338)
Cost of labor, materials, &c., in its construction and delivery at New Orleans, exclusive of "general expenses"	$195,347 16		(339)
General expenses for 1867	1,097 42		(340)
" " " 1868	5,113 13		(341)
		$201,973 71	(342)
Leaving as profits		$25,973 80	(343)

51 Upon which sum interest is claimed from the times when the moneys were received, or should have been received.

JOHN S. ABBOTT,
Solicitor for Complainant.

JULY 30, 1877.

Amendment to defendant's account.—Filed July 31, 1877.

And now come the defendants in the above entitled case, and move to amend their account heretofere filed in this cause, by striking out from the debit side of the account shown upon page 29 of the record of the hearing before the master, the item numbered 29, and being as follows:

"1869. Jan'y 2, to cash. $459.01"

The sum of money shown by said item not having been received by the defendants to their own use, but having been received by them as the agents of and paid over by them to the firm of Curtis & Smith, the persons who made and furnished for the steamship Essayons certain awnings, for which said sum of $459.01 was paid by the United States; and said sum of $459.01 has not in any manner been credited to said defendants in any of the accounts for work done, materials furnished, or otherwise heretofore filed.

And the defendants further pray for leave to make such alterations in the footings of the accounts heretofore filed by them, as said amendment will necessitate.

THE ATLANTIC WORKS,
By GEORGE P. SANGER, and
LOTHROP, BISHOP & LINCOLN,
Attorneys.

52 *Complainant's additional amendment.—Filed Aug.* 1, 1877.

Additional amendment filed by complainant, August 1, 1877, in consequence of last amendment by defendants.

Item 179*a* $3,316.30, in complainant's amendment to be changed to $3,775.31 (179*b*), and other changes necessitated by this.

JOHN S. ABBOTT,
Solicitor for Complainant.

Amendment to defendants' account and pleadings.—Filed Aug. 20, 1877.

And now come the defendants in said cause and move for leave to amend their accounts and pleadings heretofore filed before the master, by striking out from item numbered 148*b*, upon page 34 of the printed record, the following: "13.628%, $15,056.70," and substituting therefor the following: "$17,512.12," and by striking out the item numbered 151 upon said page 34; and by such other changes in figures throughout the accounts and pleadings filed by the defendants as the above change will make necessary.

THE ATLANTIC WORKS,
By LOTHROP, BISHOP & LINCOLN,
Their Attorneys.

I resume my report which I suspended to introduce the pleadings:

Receipts.

The defendants in their account of receipts and expenditures for account of the construction of the dredge-boat Essayons by them, filed Nov. 8, 1876, as amended by their amendment filed July 31, 1877, admit the receipt in cash of ($224,065.21 [7]—$459.01 [5]) two hundred and twenty-three thousand six hundred and six dollars and twenty cents ($223,606.20). The evidence before me shows that the defendants have on hand from the construction of said
53 dredge-boat, patterns and drawings of the value of one hundred and fifty dollars ($150.00).

FINDING A. I find the total amount of receipts on account of the construction of said dredge-boat Essayons, for which the defendants should be charged, to be two hundred and twenty-three thousand seven hundred and fifty-six dollars and twenty cents ($223,756.20).

Defendants' claim for extras.

Besides the receipts mentioned in finding A, the defendants have a claim against the United States of America for extras furnished by them in the construction, etc., of the dredge-boat Essayons, under the articles of agreement, a copy of which is returned herewith, marked Exhibit "Dredge Boat Contract, J. G. S., master," amounting to three thousand seven hundred and seventy-five dollars and thirty-one cents ($3,775.31). Much evidence was introduced before me touching these extras, and much argument was made as to the legality and equity of the claim for compensation therefor, and as to the value of such claim to the defendants.

It was contended by the complainant that the defence of this action has been assumed by the United States, and I find such to be the fact. It was also contended by the complainant that the United

States would make good to the defendants such sums as they should be required to pay by the decree of this circuit court in this cause, and that to avoid circuity of action and multiplicity of suits, this claim of the defendants against the United States should be passed upon by me and found good to the full amount thereof, and treated as so much of value in the hands of the defendants from their construction of the infringing dredge-boat. I cannot, however, assent to this proposition of the complainant. This suit is against the Atlantic Works. The complainant can collect the amount which may be awarded him as profits and costs of suit by the decree of this court, in this case, from the Atlantic Works alone. The United States, by their agent, have so far refused payment to the Atlantic Works of their said claim for extras, and as the United States are not a party to the record in this case, no action of mine, or of the court in confirmation thereof, can prejudice the United States as to the position they have so far maintained with respect to said claim for extras.

54 It was contended by defendants that, although their claim for compensation for extras was a just one, the difficulties connected with a proper presentation of the same, and the expense of such presentation, are such, and the result so uncertain, that the said claim has no estimable value. This may be true, and yet, upon the proofs relating to said claim before me, I cannot but conclude that the United States would pay the same upon the presentation thereof, accompanied with the same proofs exhibited before me, unless the United States have some legal or equitable defence to said claim, or to some part thereof, not made known to me in this hearing.

Under the peculiar circumstances connected with said claim of the Atlantic Works, the defendants, for compensation from the United States for extras furnished by them, I am of the opinion that they should assign the same to the complainant as part of the profits to which he is entitled upon this accounting. Such assignment may be deposited with me for the complainant within ten days after a draft of this report is submitted to counsel. If such assignment is not made, I will amend my general finding of profits in this case by adding thereto the amount of said claim, three thousand seven hundred and seventy-five dollars and thirty-one cents ($3,775.31).

Net expenditures.—Commissions.

The defendants, in their account filed Nov. 8, 1876, claim to have expended directly in the construction of the dredge-boat Essayons, including the expenses of its delivery to the agent of the United States at New Orleans, and exclusive of general expenses, the sum of two hundred thousand nine hundred and twenty-two dollars and sixteen cents ($200,922.16), item 148, on page 34 of this report. The complainant, in the amendment to his charge and statement, filed July 30, 1877, admits the cost to the defendants of labor, materials, etc., in the construction and delivery at New Orleans, of said dredge-boat, exclusive of general expenses, to be one hundred and ninety-five thousand three hundred and forty-seven dollars and sixteen cents ($195,347.16), item 339 on page 50 of this report. The difference ($5,775) between these sums arises from the fact that the defendants include "com-

55 missions" in their detailed statement of expenditures, which the complainant claims should not be included. See item 124, on page 33, item 182, on page 36, and item 194, on page 38 of this report.

One Hamilton Ruddick, in the summer of 1867, was introduced to

Nelson Curtis, agent of the Atlantic Works, and, in a general way, informed Mr. Curtis that there was a large job in the market to be obtained; that he was so connected with influential parties that he could influence it to the Atlantic Works, provided a satisfactory arrangement as to compensation therefor could be made. Subsequently Ruddick introduced to the officers of the Atlantic Works one A. F. Devereux, who informed them that the government was about to build a steam dredge-boat of large size, according to the plans of, and entirely subject to the approval of, an army officer who was an intimate friend of his (he having been an army officer himself); that this friend of his was practically unacquainted with the details of the construction of such a boat, but that he had sole control of the matter, and must and would give out the contract for building this boat to some party of whose ability, financially and mechanically, he was well satisfied. Devereux represented that this friend of his had another friend (who had also been an army officer) upon whom he placed such dependence that he was at that time having prepared the plans and specifications of the proposed dredge-boat at the works of a company of which this friend No. 2 was then manager, and that it would take a strong influence to take him elsewhere. Devereux stated that he thought he could bring influence to bear to obtain the job for the Atlantic Works, provided his friend, having the sole control thereof, was personally satisfied that the Atlantic Works were competent to do it. Subsequently proposals for building the dredge-boat, dated Sept. 19, 1867, appeared in the Boston Daily Advertiser. The Atlantic Works put in a bid some twenty thousand dollars lower than any other bid. The president of the Atlantic Works, Devereux, and probably Ruddick, were present in the office of Gen. M. D. McAlester, in New York, at the opening of the bids, and the contract for building the dredge-boat was awarded to the Atlantic Works by Gen. McAlester, the person of whom Devereux had spoken as
56 his intimate friend. Some time after the contract was signed, the memorandum returned herewith, marked "Certificate for Commissions, J. G. S., Master," was signed, and payments were duly made by the Atlantic Works as indorsed on said certificate for commissions.

FINDING B.—I find that the defendants should not be allowed upon this accounting, as an expenditure in the construction of the infringing dredge-boat, commissions, five thousand five hundred and seventy-five dollars ($5,575), item 124, on page 33 of this report.

FINDING C.—I find that the defendants expended directly in the construction of the dredge-boat Essayons, including the expenses of its delivery to the agent of the United States at New Orleans, and exclusive of general expenses, one hundred and ninety-five thousand three hundred and forty-seven dollars and sixteen cents ($195,347.16).

General expenses.

An examination of the pleadings, as finally amended, shows that the defendants claim allowances, as expenditures, as follows:

General expenses for 1867, 25.6 %.....	$6,250 28	(148*a*)
" " " 1868.....	17,512 12	(Amendment p. 28.)
Total general expenses claimed.....	$23,762 40	

The defendants, by Nelson Curtis, their agent, in explanation of the item 148*a*, general expenses for 1867, and item 148*b*, general expenses

for 1868 (before item 148*b* was amended), produced four papers, entitled and marked respectively—

E. Detailed statement of general expenses for 1867.

F. Statement showing cost, profit, and loss on all jobs for the year 1867.

e. Detailed statement of general expenses for 1868.

f. Statement showing cost, profit, and loss on all jobs for the year 1868.

The amendment to defendants' account and pleadings, filed August 20, 1877, in changing item 148*b* to its amended form—

General expenses for 1868 .... $17,512 12

and striking out item 151, enables me, under the pleadings, to consider the contract-price paid by the Atlantic Works for the hull of
57 the Essayons, chargeable with general expenses or not, as equity may require. Papers E, F, *e*, and *f* remain before me, in effect, specifications under items 148*a* and 148*b*, as amended.

The complainant by his pleadings before me, first, attacked the principle upon which the defendants estimated the general expenses claimed in their account, alleging that such expenses should be considered for the period covered by the building, or the building and delivery to the United States, of the dredge-boat Essayons, and not by the years 1867 and 1868. The complainant, however, did not furnish me with sufficient data to practically determine the general expenses of the defendants for substantially the precise period covered by the building of the infringing dredge-boat. The defendants, by their account and specifications, did furnish me with the means of practically determining their general expenses for the years 1867 and 1868, during portions of which years the Essayons was built. I adopt as the only available method of estimating the defendants' general expenses in this case that presented by them, namely, the method of estimating such expenses by periods, each extending over a calendar year.

The complainant by his pleadings before me, secondly, attacked the claim of the defendants for general expenses in certain details of the specification of that claim. I now proceed to the consideration of that attack.

I reproduce in schedules "E," "F," "*e*," and "*f*," annexed to this report, such portions of the papers "E," "F," "*e*," and "*f*," exhibited by Mr. Curtis, in specification of defendants' claim for general expenses, as are in my judgment convenient for a clear understanding of complainant's charges against said claim and specifications thereunder, and of my action in the premises.

One of complainant's charges, as amended, against this claim for general expenses is substantially that defendants have included in general expenses the following items, which should not be so included:

In general expenses for 1867:

Traveling expenses	*595	51	(204)
Insurance on buildings and tools	4,277	50	(205)
58 Postage and revenue stamps	85	92	(326)
City tax	510	10	(206)
City, State, and county tax	1,850	70	(207)
Tax on Glendon	34	88	(208)
Rent " "	1,050	00	(209)
Stationery, papers, &c	*702	09	(211)

Advertising	1,053 94	(212)
Telegrams	*18 38	(327)
Attorney's fees	81 10	(213)
Picture steamer Voyageur	15 00	(214)
Half expense on government work, M. & A	250 00	(216)
Depreciation on tools	3,038 21	(217)
Storehouse	*1,676 26	(328)
Salaries, $10,717.71, less $150.00	10,567 71	(222)

In general expenses for 1868:

Office rent	*454 30	(224)
Glendon rent	150 00	(329)
Books, papers, &c	*118 28	(226)
Advertising	240 20	(227)
Traveling expenses	*383 15	(228)
State tax	425 08	(229)
State, city, and county tax	1,446 68	(230)
Revenue and postage stamps	*156 29	(231)
Buildings	*266 70	(330)
Stationery, &c	*1,113 46	(233)
Glendon tax	36 90	(234)
Scow account	*545 48	(331)
Attorney's fees	93 61	(236)
Rent of deposit safe	*23 00	(332)
Digging drain	42 03	(333)
Reimbursement to A. R. Turner	*18 86	(334)
Turkeys at Thanksgiving	36 10	(335)
New office furniture	658 53	(238)
Depreciation of tools	2,858 40	(239)
Chromo	654 94	(240)
59 16″ x 42″ eng. patterns	*34 70	(336)
Sundries	*26 75	(337)
Glendon	544 10	(243)
"	2,862 00	(245)
Salaries	11,037 66	(246)

Those of the above items against which I have placed a star were conceded at the argument before me to be rightfully included in general expenses, and I dismiss those items from further consideration.

The above items which are marked with a star are all the items as to which, upon inspection of the pleadings as amended and taking into consideration the concessions of counsel at the argument, the parties are at issue on the question whether they should or should not be included in general expenses. I will now comment upon these items in detail.

Insurance and taxes.

Item 205—Insurance on buildings and tools	$4,277 50	
" 206—City tax	510 10	
" 207—City, State, and county tax	1,850 70	
" 208—Tax on Glendon	34 88	
" 229—State tax	425 08	
" 230—State, city, and county tax	1,446 68	
" 234—Glendon tax	36 90	

If a person purchases with his own funds a plant and uses the same in the manufacture of an infringing article he cannot be allowed, upon

an accounting for profits, interest on the amount invested in the plant, or other compensation for its use. If he hires a plant and in like manner uses it, he is entitled upon such accounting to an allowance for the amount of rent paid by him. After the plant is obtained, whether purchased or hired, an infringer is entitled, upon an accounting for profits, to an allowance for all sums expended by him in protecting, maintaining, and keeping it effective. If a plant is hired, the rent paid therefor is proportioned so as to include reimbursement to the owner for such amount as he may be required to pay for taxes, and to
60 include reimbursement for such amount as he may be required to pay for insurance, or if the owner takes upon himself the risk of non-insurance, compensation for the risk incurred. If the plant is owned by the infringer, he is entitled, upon an accounting for profits, to an allowance for expenditures for taxes which he is obliged to pay, and for such reasonable insurance as a prudent man situated as the infringer is would put upon the plant.

FINDING D.—I allow, as proper expenditures to be included by the defendants in general expenses upon this accounting, the sums claimed by them to have been expended for insurance and taxes.

Glendon rent.

Item 209—Rent on Glendon	$1,050 00
" 329—Glendon rent	150 00

Glendon was a wharf rented by the defendants, and was used by them in the building of large vessels, and was necessary to the prosecution of the business carried on by them. It was not used in the construction of the infringing dredge-boat. It was, however, a part of their general plant. Other work, which is charged with its proportion of general expenses, was done upon this wharf during the years 1867 and 1868.

FINDING E.—I allow as proper expenditures to be included by the defendants in general expenses upon this accounting the sums claimed by them to have been expended for rent of the wharf Glendon.

Advertising.

Item 212—Advertising	$1,053 94
" 214—Picture steamer Voyageur	15 00
" 227—Advertising	240 20
" 240—Chromo	654 94

It was contended by complainant that the expenditures for advertising, claimed by defendants on this accounting as general expenses, were for advertising, which, although judicious and of service in the procurement of contracts from the public generally had nothing to do with the procurement of government contracts, and should not be allowed upon an accounting for profits where the infringing machine was built under a government contract. It must
61 be considered, however, that the question now to be determined is not what are to be allowed as special expenditures incurred in the building of the infringing dredge boat, but what are to be allowed as the general expenses of the defendants in the prosecution of their general business, including the building of the Essayons and all other jobs done by them in the years 1867 and 1868. The necessity for advertising almost any business is well understood by business men. The

defendants are entitled to an allowance, as a part of their general expenses for 1867 and 1868, for what they in good faith expended in keeping themselves and their business before the public generally, as well as what they in good faith expended in efforts to obtain government contracts.

As to picture of the steamer Voyageur, I have some doubt upon the evidence, whether it was mainly an advertisement of defendants' business or an ornament for their office, and, when purchased, a part of their plant. Doubtless it contributed in some degree to advertise their business, but upon the whole evidence I am not satisfied that its purchase was legitimate as an advertising expenditure.

Item 240, chromo, $654.94, includes expenses of the preparation of the design of the original picture, $130, and amount paid William E. Norton for an oil painting after the prepared design, from which painting the chromo was taken, $400. The chromos were used for advertising purposes, but other chromos of the same picture were struck off and issued for advertising purposes in succeeding years. The picture itself has value independently of its use in the preparation of chromos. I think the sum equal to the sum paid Norton for the oil painting, $400, may fairly be considered as an expenditure on account of the defendants' plant, and the balance of item 240, $254.94, as an expenditure on account of the general expenses.

FINDING F.—I allow, as proper expenditures to be included by the defendants in general expenses upon this accounting, the sums claimed by them to have been expended for advertising, except item 214, picture of steamer Voyageur, $15, which I disallow, and except the $400 of item 240, chromo, being that part of said item 240, which I consider an expenditure on account of defendants' plant and which I also disallow.

62 *Attorney's fees; turkeys at Thanksgiving.*

Item 213—Attorney's fees		$81 10
" 236— " " &c		93 61
" 335—Turkeys at Thanksgiving		36 10

There is no necessary connection between attorney's fees and turkeys at Thanksgiving, except that I do not think complainant's counsel will object to the allowance of either in this accounting as general expenses of defendants, upon the evidence before me. If such objection is made upon my submitting a draft report I will state my reasons for the allowance at length in a second draft report.

FINDING G.—I allow as proper expenditures to be included by the defendants in general expenses upon this accounting the sums claimed by them to have been expended for attorney's fees and for turkeys at Thanksgiving.

Government work, M. & A.

Item 216—Half expense on government work, M. & A		$250 00

FINDING H.—This item 216 should not be included by the defendants in general expenses upon this accounting.

Depreciation on tools.

Item 217—Depreciation on tools		$3,038 21
" 239— " of tools		2,858 40

An examination of the detailed statements of general expenses of defendants for 1867 and 1868, papers E and *e*, shows a large amount expended for repairs of, and additions to, buildings and tools. Except so far as the pleadings before me show that the complainant objects to the allowance of the several items included in said detailed statements, E and *e*, I have not considered, and do not consider that the said items are open for consideration by me; but in passing upon items 217 and 239, depreciation on tools, which are objected to, I am obliged to consider what has already been claimed by and allowed to the defendants for repairs of and additions to buildings and tools, and it appears that considerable portions, at least, of the items marked with letters on Schedules E and *e*, as printed herewith, have been so claimed and allowed.

63 The report of the master in Rubber Company v. Goodyear, 9 Wall., 788, contained the following sentences, which were approved by the court, and which are applicable to this accounting:

"Large amounts appear * * * to have been expended in repairs of buildings and machinery and in the purchase of new machinery, tools, and fixtures. No further allowance is made by the master for wear and tear and depreciation."

FINDING I.—I find that the defendants should not be allowed in general expenses upon this accounting the sums claimed by them on account of depreciation of tools.

Salaries.

Item 222—Salaries, $10,717.71, less $150.00	$10,567 71
Item 246— "	11,037 66

Nelson Curtis was a stockholder in the defendant company, owning 255 shares during the years 1867 and 1868, and received an annual salary of $3,000 for services rendered said company during said years. Oliver Edwards was a stockholder in the defendant company, owning 310 shares, and received a salary as president of said company from Jan. 1 to Sept. 12, 1867, at the rate of $3,000 a year. It was contended by complainant that the defendants could not lawfully include in their general expenses salaries paid to such of their officers as were stockholders in the defendant company. In my judgment, however, the decisions of the courts have established the principle that corporations upon an accounting for profits may be allowed as proper disbursements such reasonable salaries as they have in good faith paid their officers and agents for services rendered, irrespective of whether such officers or agents were or were not, during the period covering said services, stockholders therein. The reasonableness of the salaries paid Curtis and Edwards and the good faith of the defendants as to the payment of said salaries are not questioned.

FINDING J.—I allow, as proper expenditures to be included in general expenses upon this accounting, the sums claimed by them to have been expended for salaries.

64 *New office furniture.*

Item 238—New office furniture	$658 53

This expenditure was for an addition to defendants' plant.

FINDING K.—I find that the defendants should not be allowed in general expenses upon this accounting the sum claimed by them to have been expended for new office furniture.

Glendon.

Item 243—Glendon $544 10
" 245— " 2,862 00

Upon the detailed statement of general expenses for 1868, Paper *e*, these items appear under the head of "labor" as follows:

LABOR.

Glendon. Gen. work, 2,384¼ h'rs..... $544 10 (243)
" Tools, 12,630¾ " 2,862 00 (245)

Upon the evidence before me, I must consider these expenditures to have been for general work done on the wharf Glendon, and for labor expended on tools to be used on that wharf. A sufficient allowance for repairs of buildings and tools to keep them in good condition has been made in the items included in general expenses, which are not questioned by complainant. Under these circumstances, these expenditures on account of general work on the wharf Glendon, and for or upon tools for that wharf, are deemed by me as made on account of additions to defendants' plant.

FINDING L.—I find that the defendants should not be allowed in general expenses upon this accounting the sums claimed by them to have been expended, specified in items 243 and 245, "Glendon."

65 *Apportionment of general expenses for* 1867.

The net general expenses of defendants for 1867, as claimed by them, shown by Paper E, detailed state- of general expenses for 1867, are $46,762 80 (247)

Of these general expenses I have disallowed, by my findings heretofore made, the following:

Finding F—item 214—picture st'm'r Voy-ageur	$15 00	
Finding H—item 216—half expense on gov-ernment work, M. & A	250 00	
Finding I—item 217—depreciation on tools	3,038 21	
Total disallowed		$3,303 21 (248)

Deducting from the amount claimed by defendants the amount disallowed by me and there remains to be taken as the general expenses of defendants in the management of their business for 1867, the sum of $43,459 59 (249)

The total cost of all jobs for the year 1867 done by the defendants, as shown by Paper F, statement showing cost, profit, and loss on all jobs for the year 1867, is $182,258.07 (250); and the cost of what was done upon the dredge-boat Essayons in 1867, as shown by Paper F, is $24,-374.20 (251).

I make the following proportion:

Total cost of all jobs done in 1867.	Cost of work done on Essayons in 1867.	Total general expenses for 1867.	General expenses chargeable to work done on Essayons in 1867.
$182,258 07	$24,374 20	$43,459 59	$5,812.04 (252)

The percentage of general expenses upon the cost of jobs done by defendants in 1867, is 23,845 (253).

FINDING M.—I find the general expenses of the defendants for 1867, chargeable to work done on the Essayons, to be $5,812.04 (254).

66 *Apportionment of general expenses for* 1868.

The net general expenses of defendants for 1868, as claimed by them, shown by Paper *e*, detailed statement of general expenses for 1868, are $53,047 07 (255)

Of these general expenses I have disallowed, by my findings heretofore made, the following:

Finding F—item 240—chromo in part, namely	$400 00	
Finding I—item 239—depreciation of tools	2,858 40	
Finding K—item 238—new office furniture	658 53	
Finding L—item 243—Glendon	544 10	
" " " 245— "	2,862 00	
Total disallowed		$7,323 03 (256)

Deducting from the amount claimed by defendants the amount disallowed by me and there remains, to be taken as the general expenses of defendants in the management of their business for 1868, the sum of $45,724 04 (257)

The total cost of all jobs for the year 1878, done by the defendants, as shown by paper *f*, statement showing cost, profit, and loss on all jobs for the year 1868, is $534,792 22 (258)

In this sum are included certain expenditures which should not be included, and which I therefore deduct, as follows:

New office furniture	$1,000 00	
Chromo	1,398 31	
Horses and carriages	250 00	
		$2,648 31 (259)

There remains to be taken as the cost of all jobs done by defendants in 1868, chargeable with general expenses for that year, the sum of $532,143 91 (260)

67 The cost of what was done upon the dredge-boat Essayons in 1868, as shown by said paper *f*, is $176,547.96 (261).

I make the following proportion:

Total cost of all jobs done in 1868.	Cost of work done on Essayons in 1868.	Total general expenses for 1868.	General expenses chargeable to work done on Essayons in 1868.
$532,143 91	$176,547 76	$45,724 04	$15,169 74 (262)

The percentage of general expenses upon the cost of jobs done by defendants in 1868 is 8.592+(263).

FINDING N.—I find the general expenses of the defendants for 1868, chargeable to work done on the Essayons, to be $15,169.74 (364).

SUMMARY.

I charge the defendants with receipts on account of the construction of the infringing dredge-boat Essayons, as per Finding A		$223,716 20
I credit the defendants with expenditures in the construction of said dredge-boat as follows:		
Amount expended directly in the construction, etc., of said dredge-boat, exclusive of general expenses, as per Finding C	$195,347 16	
General expenses for 1867, as per Finding M.	5,812 04	
General expenses for 1868, as per finding N	15,169 74	
Total expenditures		$216,328 94
The difference, being profits, is		$7,427 26

GENERAL FINDING.—I find that the profits which the defendants have received, or which have arisen or accrued to them from the infringement complained of, and to which the complainant is entitled upon this accounting, amount to the sum of seven thousand four hundred and twenty-seven dollars and twenty-six cents ($7,427.26).

68 *Interest on profits.*

I am asked by complainant to allow him interest on the profits ($7,427.26) which I find that the defendants have made by the infringement of his patent. The facts upon which this request is made are as follows:

1. The contract for the building of the Essayons was signed Oct. 15, 1867, and provided that the Atlantic Works should commence work on the hull, engines, and machinery on or before Oct. 20, 1867, and work was commenced accordingly.

2. The letters patent upon which this suit is founded are dated Dec. 17, 1867, the inventor, Edwin L. Brady, the complainant in this cause, having filed on the seventeenth day of May, 1867, a caveat in the Patent Office of the United States substantially describing the invention for which said letters patent were afterwards applied for and issued.

3. The bill of complaint in this cause was filed in the clerk's office April 9, 1868, and a subpœna and summons to show cause why injunction should not issue against the Atlantic Works were thereupon issued, and were duly served on the Atlantic Works April 11, 1868.

4. Affidavits upon the motion for an injunction, pendente lite, were duly filed, and, the motion being heard, the court declined to issue such injunction.

5. Said Brady notified the Atlantic Works that he had procured a patent for a dredge-boat like the one they were building, and claimed a patent fee under it some time in December, 1867, and the Atlantic Works replied, stating their ignorance of the existence of such patent, and referring to Gen. McAlester, who assured them he had proofs that Brady's patent was invalid.

6. The final payment to the defendants upon the contract price ($223,000) of the Essayons was made Aug. 14, 1868, and a small payment ($606.20) for extra work was made Jan. 7, 1869. All moneys so received by the defendants, after paying such bills as were contracted on account of the Essayons, passed into the general treasury of the defendants, and were used by them for the general purposes of their business and for payment of dividends.

69 If interest on the profits of the defendants to be accounted for upon this accounting is allowed, it should be estimated at the rate of 6 % per annum from Jan. 7, 1869, to the date of the final decree in this cause.

Courts have arrived at different conclusions as to the allowance of interest on profits found by a master upon an accounting for profits. In the case of Troy Iron and Nail Factory v. Corning, 3 Fisher, 498, the court (Shipman, J., Mr. Justice Nelson concurring), confirmed the report of the master as to profits, with a certain modification, and directed a decree to be entered for complainants for the profits made by the defendants between Oct. 15, 1845, and March 31, 1849, with interest from said March 31, 1849, to the date of the decree. This order, however, was made by the court upon the facts found by the master, and the clerk was directed to compute the interest and include the same in the decree upon the entry thereof. In Mowry v. Whitney, 14 Wall., 521, American Nicholson Pavement Co. v. City of Elizabeth et al., 6 Off. Gaz., 765, and Littlefield et al. v. Perry, 7 Off. Gaz., 968, the court disallowed interest on the profits made by the defendants by their infringements. The doctrine which I derive from these cases is that the master is not to increase the profits which he finds a defendant to have made by his infringement of a complainant's patent by the addition of interest, but is to report to the court the facts bearing upon the question whether the circumstances of the infringement were such as, on the one hand, ought to relieve the infringer from liability to interest on profits (Mowry v. Whitney), or, on the other hand, such as would justify the addition of interest in order to give complete indemnity for losses sustained by wilful infringement (Littlefield et al. v. Perry). Of course, profits per se are neither increased or diminished from the fact that the infringement was or was not wilful, or that the complainant has or has not been damaged thereby.

Respectfully submitted,

JOHN G. STETSON, *Master.*

70 *Dredge-boat contract.—J. G. S., master.*

Articles of agreement, entered into this 15th day of October, eighteen hundred and sixty-seven (1867), between Brev. Brig. Gen. M. D. McAlester, major, Corps of Engineers, U. S. Army, of the one part, and the Atlantic Works, Oliver Edwards, president, of the city of Boston, in the county of Suffolk, in the State of Massachusetts, of the other part.

This agreement witnesseth that the said Brev. Brig. Gen. M. D. McAlester, major, Corps of Engs., U. S. Army, for and in behalf of the United States of America, and the said Atlantic Works, O. Edwards, pres., for their heirs, executors, and administrators, have mutually agreed, and by these presents do mutually covenant and agree, to and with each other, in the manner following, namely: That the said Atlantic Works, O. Edwards, pres., shall construct and equip, ready for sea and for work, at Boston, Mass., and deliver at such point as the engineer in

The percentage of general expenses upon the cost of jobs done by defendants in 1868 is 8.592 + (263).

FINDING N.—I find the general expenses of the defendants for 1868, chargeable to work done on the Essayons, to be $15,169.74 (364).

SUMMARY.

I charge the defendants with receipts on account of the construction of the infringing dredge-boat Essayons, as per Finding A		$223,716 20
I credit the defendants with expenditures in the construction of said dredge-boat as follows:		
Amount expended directly in the construction, etc., of said dredge-boat, exclusive of general expenses, as per Finding C	$195,347 16	
General expenses for 1867, as per Finding M.	5,812 04	
General expenses for 1868, as per finding N.	15,169 74	
Total expenditures		$216,328 94
The difference, being profits, is		$7,427 26

GENERAL FINDING.—I find that the profits which the defendants have received, or which have arisen or accrued to them from the infringement complained of, and to which the complainant is entitled upon this accounting, amount to the sum of seven thousand four hundred and twenty-seven dollars and twenty-six cents ($7,427.26).

68 *Interest on profits.*

I am asked by complainant to allow him interest on the profits ($7,427.26) which I find that the defendants have made by the infringement of his patent. The facts upon which this request is made are as follows:

1. The contract for the building of the Essayons was signed Oct. 15, 1867, and provided that the Atlantic Works should commence work on the hull, engines, and machinery on or before Oct. 20, 1867, and work was commenced accordingly.

2. The letters patent upon which this suit is founded are dated Dec. 17, 1867, the inventor, Edwin L. Brady, the complainant in this cause, having filed on the seventeenth day of May, 1867, a caveat in the Patent Office of the United States substantially describing the invention for which said letters patent were afterwards applied for and issued.

3. The bill of complaint in this cause was filed in the clerk's office April 9, 1868, and a subpœna and summons to show cause why injunction should not issue against the Atlantic Works were thereupon issued, and were duly served on the Atlantic Works April 11, 1868.

4. Affidavits upon the motion for an injunction, pendente lite, were duly filed, and, the motion being heard, the court declined to issue such injunction.

5. Said Brady notified the Atlantic Works that he had procured a patent for a dredge-boat like the one they were building, and claimed a patent fee under it some time in December, 1867, and the Atlantic Works replied, stating their ignorance of the existence of such patent, and referring to Gen. McAlester, who assured them he had proofs that Brady's patent was invalid.

6. The final payment to the defendants upon the contract price ($223,000) of the Essayons was made Aug. 14, 1868, and a small payment ($606.20) for extra work was made Jan. 7, 1869. All moneys so received by the defendants, after paying such bills as were contracted on account of the Essayons, passed into the general treasury of the defendants, and were used by them for the general purposes of their business and for payment of dividends.

69 If interest on the profits of the defendants to be accounted for upon this accounting is allowed, it should be estimated at the rate of 6 % per annum from Jan. 7, 1869, to the date of the final decree in this cause.

Courts have arrived at different conclusions as to the allowance of interest on profits found by a master upon an accounting for profits. In the case of Troy Iron and Nail Factory v. Corning, 3 Fisher, 498, the court (Shipman, J., Mr. Justice Nelson concurring), confirmed the report of the master as to profits, with a certain modification, and directed a decree to be entered for complainants for the profits made by the defendants between Oct. 15, 1845, and March 31, 1849, with interest from said March 31, 1849, to the date of the decree. This order, however, was made by the court upon the facts found by the master, and the clerk was directed to compute the interest and include the same in the decree upon the entry thereof. In Mowry v. Whitney, 14 Wall., 521, American Nicholson Pavement Co. v. City of Elizabeth et al., 6 Off. Gaz., 765, and Littlefield et al. v. Perry, 7 Off. Gaz., 968, the court disallowed interest on the profits made by the defendants by their infringements. The doctrine which I derive from these cases is that the master is not to increase the profits which he finds a defendant to have made by his infringement of a complainant's patent by the addition of interest, but is to report to the court the facts bearing upon the question whether the circumstances of the infringement were such as, on the one hand, ought to relieve the infringer from liability to interest on profits (Mowry v. Whitney), or, on the other hand, such as would justify the addition of interest in order to give complete indemnity for losses sustained by wilful infringement (Littlefield et al. v. Perry). Of course, profits per se are neither increased or diminished from the fact that the infringement was or was not wilful, or that the complainant has or has not been damaged thereby.

Respectfully submitted,

JOHN G. STETSON, *Master.*

70 *Dredge-boat contract.—J. G. S., master.*

Articles of agreement, entered into this 15th day of October, eighteen hundred and sixty-seven (1867), between Brev. Brig. Gen. M. D. McAlester, major, Corps of Engineers, U. S. Army, of the one part, and the Atlantic Works, Oliver Edwards, president, of the city of Boston, in the county of Suffolk, in the State of Massachusetts, of the other part.

This agreement witnesseth that the said Brev. Brig. Gen. M. D. McAlester, major, Corps of Engs., U. S. Army, for and in behalf of the United States of America, and the said Atlantic Works, O. Edwards, pres., for their heirs, executors, and administrators, have mutually agreed, and by these presents do mutually covenant and agree, to and with each other, in the manner following, namely: That the said Atlantic Works, O. Edwards, pres., shall construct and equip, ready for sea and for work, at Boston, Mass., and deliver at such point as the engineer in

charge may direct, in the Mississippi River, at or below New Orleans, a dredge-boat for improving the mouth of the Mississippi River, for $223,000; that the said dredge-boat shall be constructed and equipped ready for sea and for work, and as described, represented, and specified herein, and by and in the models, drawings, specifications, and instructions explaining or modifying the same, to be furnished by the engineer in charge, or the agent or inspector appointed to inspect the materials and workmanship employed; that during the construction of the dredge-boat reasonable facilities for inspecting the materials and workmanship shall be afforded the agent or inspector appointed for the purpose; that on the completion of the dredge-boat, and its equipment ready for sea and for work, a thorough trial of all its parts shall be had (including a trial trip on the ocean) in presence of the engineer in charge, or the inspector, and in the same manner and to the extent required by him; that the dredge-boat shall be propelled throughout her sea voyage between the places of construction and delivery by her own engines alone; that the approval of the dredge-boat is understood to take place at the place of construction on the completion of the trials and trial trip, pro-
71 vided the conditions and agreements herein laid down and referred to shall thus far have been complied with to the satisfaction of the engineer in charge; and the acceptance of the dredge-boat to take place on delivery at the place designated, provided all the conditions and agreements herein set forth and referred to shall have been complied with.

That the engineer in charge may, from the date of acceptance of the dredge-boat, employ all the officers and men employed by the contractor in her delivery at a fair rate of compensation, provided their efficiency be unquestioned. That the models, drawings, and specifications herein referred to and the instructions explaining or modifying the same to be given by the engineer in charge, or his duly appointed agent or inspector, are a part of this contract, and must be followed in their detail accordingly.

That all materials and workmanship offered for use under this contract shall, before being accepted or used, be subject to a rigid inspection by an inspector appointed on the part of the government; and such as do not conform to the specifications set forth in this contract shall be rejected. That the materials and workmanship employed in the construction of the dredge-boat shall be of the very best quality used in the construction of first-class ocean steamers.

That the said Atlantic Works shall commence work on the hull, engines, and machinery on or before the twentieth (20th) day of October, eighteen hundred and sixty-seven (1867), and complete the construction and equipment ready for sea and for work, on or before the twentieth (20th) day of March, eighteen hundred and sixty-eight (1868), and complete the trials and trial trip and the delivery on or before the tenth (10th) day of April, eighteen hundred and sixty-eight (1868).

That payment shall be made forty per centum of the contract price when the hull shall have been launched and approved, and the boilers and the cylinders of the three propeller engines shall have been completed and approved; thirty-five per centum of the contract price when the dredge-boat contracted for shall have been completed and approved, reserving twenty-five per centum of the contract price until the dredge-
72 boat shall have been delivered and accepted.

No member of Congress, officer, or agent of the government,

or any person employed in the public service, shall be admitted to any share herein, or any benefit which may arise herefrom.

In witness whereof the undersigned have hereunto placed their hands and seals the day and date first above written.

Executed in quintuplicate.

M. D. MCALESTER, [L. S.]
Br. Brig. Gen. in charge I. M. M. River.
OLIVER EDWARDS, *Pres.* [L. S.]

Witnesses:
J. C. HUNTER.
JOS. G. GILBERT.

Certificate for commissions.—J. G. S., master.

$5,575.00.]

This will certify that there is due to A. F. Devereux and Hamilton Ruddick the sum of five thousand five hundred and seventy-five dollars, payable pro rata at such times and in such amounts as we shall receive our payments.

FRANKLIN W. SMITH,
Treas. Atlantic Works.

(Indorsed as follows:) Paid, Boston, March 18, '68, on acct. of within, twelve hundred and forty-nine $\frac{91}{100}$ dollars.

FRANKLIN W. SMITH, *Tr.*,
By E. T. COPELAND.

Paid, Boston, April 22, 1868, on acc't of within, nine hundred and eighty $\frac{9}{100}$ dollars.

FRANKLIN W. SMITH, *Tr.*,
By C. F. COX.

Boston, June 26, 1868. Paid on acc't of the within, nineteen hundred and fifty-one dollars $\frac{25}{100}$, $1,951.25.

FRANKLIN W. SMITH, *Tr.*,
Per C. F. COX.

BOSTON, *Aug.* 15, 1868.

Paid in full on the within, thirteen hundred and ninety-three $\frac{75}{100}$ dollars.

F. W. SMITH, *Tr.*,
Per C. F. C.

73 E.—*Detailed statement of general expenses for* 1867, *without interest on capital.*

MATERIALS.

* * * * * * *			
Bolts, nuts, etc	$409	97	D
Buildings, repairs	266	85	E
Piping, etc	221	75	F
Comp. castings	4	59	G
Iron "	19	26	H
* * * * * * *			

Hardware, brushes, tinware, etc	388 40	I		
Traveling expenses	595 51	(204)		
* * * * *	*	*		
Files	412 08	N		
Insurance on buildings and tools	4,277 50	(205)		
Postage and rev. stamps	85 92	(326)		
* * * * *	*	*		
City tax	510 10	(206)		
City, State, and county tax	1,850 70	(207)		
Tax on Glendon	34 88	(208)		
Rent on "	1,050 00	(209)		
Lumber	540 04	V		
Paints, oils, etc	1,111 27	W		
Repairs tools	740 73	X		
Weighed "	496 40	Y		
Stationery, papers, etc	702 09	(211)		
Advertising	1,053 94	(212)		
* * * * *	*	*		
Metals	22 63	C^2		
Lace leather and belting	78 64	D^2		
* * * * *	*	*		
Wire	26 18	F^2		
* * * * *	*	*		
Telegrams	18 38	(327)		
Attorney's fees	81 10	(213)		
* * * * *	*	*		
74 Coal barrows	$14 50	L^2		
Picture st'm'r Voyageur	15 00	(214)		
Handles	61 28	N^2		
Stools and stands, drawing-room	11 75	O^2		
Pattern work	30 36	P^2		
Half expense on gov't bill, M & A	250 00	(216)		
* * * * *	*	*		
Ref'd iron, 18.66 * * *	*	*		
Sundries	60 88	F^2		
Depreciation on tools	3,038 21	(217)		
			$26,894	69 (265)

LABOR.

Machinists, gen. work,	10,282 hrs	$3,056 09	V^2	
Boiler makers, "	2,102 "	500 36	W^2	
Draughtsmen, "	2,770 "	1,273 49	X^2	
Smiths, "	1,156 "	326 65	Y^2	
Pattern m'k'rs, "	2,137 "	759 34	Z^2	
Tozer, "	500 "	227 28	A^3	
Machinists, tools,	8,849 "	2,433 23	B^3	
Boiler m'k'rs, "	1,083 "	263 92	C^3	
Smiths, "	5,497 "	1,387 97	D^3	
Pattern m'k'rs, "	145 "	52 67	E^3	
Machinists, buildings,	202 "	56 56	F^3	
Pattern m'k'rs, "	329 "	97 06	G^3	
* * * * *	*	*		
Storehouse,	6,236 "	1,676 26	(328)	
Salaries,	22,065 "	10,717 71	(222)	
			$26,167	59 (266)
			$53,062	28 (267)

CREDITS.

Labor (salaries ret'd)	$150 00	V[3]
		$6,299 48 (268)
Net. gen. expenses		$46,762 80 (269)
Total amount materials and labor furnished during 1867		$182,258 07 (250)
Percentage of gen. expenses, 25.6 % (271).		

75 F.—*Statement showing cost, profit, and loss on all jobs for the year 1867.*

	Actual cost.	Added.	Total.
Dredge-boat	$24,374 20	$6,250 28	$30,624 48
	$182,258 07 (250)	$46,726 80	$229,020 87

e.—Detailed statement of general expenses for 1868.

MATERIALS.

Office rent	$454 30	(224)
Glendon rent	150 00	(329)
Bolts, nuts, etc.	468 94	F[4]
Books, papers, etc.	118 28	(226)
Advertising	240 20	(227)
Traveling expenses	383 15	(228)
State tax	425 08	(229)
State, city, and county tax	1,446 68	(230)
Files	643 94	S[4]
Hardware, tinware, etc.	997 10	T[4]
Revenue and postage stamps	156 29	(231)
Buildings	266 70	(330)
Piping, etc.	99 11	Y[4]
Lumber	194 12	Z[4]
Metals	27 96	A[5]
Paints, oils, etc.	2,015 89	B[5]
Stationery, etc.	1,113 46	(233)
Repairs tools	2,602 92	D[5]
Weighed tools	2,078 93	E[5]
Glendon tax	36 90	(234)
Scow acc't	545 48	(331)

76	Pattern work, etc.	$60 80	J[5]	
	* * * * *	*	*	
	Attorney's fees, etc.	93 61	(236)	
	Lace leather, etc.	32 50	M[5]	
	* * * * *	*	*	
	Refined, sheet, and hoop iron, etc.	37 80	O[5]	
	Rent of deposit safe	23 00	(332)	
	Painting, whitewashing, etc.	19 37	Q[5]	
	* * * * *	*	*	
	Digging drain	42 03	(333)	
	Repairs, stove	29 25	T[5]	
	* * * * *	*	*	
	Reimbursement to A. R. Turner	18 86	(334)	
	Turkeys at Thanksgiving	36 10	(335)	
	* * * * *	*	*	
	New office furniture	658 53	(238)	
	Depreciation of tools	2,858 40	(239)	
	Chromo	654 94	(240)	
	16″ × 42″ eng. patterns	34 70	(336)	
	* * * * *	*	*	
	Sundries	26 75	(337)	
				$31,608 17 (272)

LABOR.

Machinists, gen. work,	9,361¼ hrs.	$2,409 91	A[6]		
Boiler makers, "	808¾ "	188 64	B[6]		
Draftsmen, "	1,232½ "	571 85	C[6]		
Smiths, "	992 "	204 35	D[6]		
Pat. m'k'rs, "	1,781¼ "	638 94	E[6]		
Glendon, "	2,384¼ "	544 10	(243)		
Machinists, tools,	11,229 "	2,900 32	G[6]		
Boiler m'k'rs, "	1,911¾ "	455 24	H[6]		
Smiths, "	8,325½ "	1,752 74	I[6]		
Pat. m'k'rs, "	307 "	110 37	J[6]		
Glendon, "	12,630¼ "	2,862 00	(245)		
* * * * *		*	*		
Salaries		11,037 66	(338)		
				$27,144 78	(273)
				$58,752 95	(274)
77 Amount carried forward				$58,752 95	

Credits.

* * * * * * *			
Total amount credits	$5,705 88		
		$5,705 88	(275)
Net amount gen. expenses		$53,047 07	(276)

Amount of business for the year chargeable with gen. expenses $389,687 35 (277)
Rate, 13.628 % (278).

F.

Statement showing cost, profit, and loss on all jobs for the year 1868.

	Actual cost.	Added.	Total.
Dredge boat Essayons	$176,547 96	$15,056 70	$191,604 66
New office furniture	1,000 00		1,000 00
Horses and carriages	250 00		250 00
Chromo	1,398 31		1,398 31
Total amt. for the year	$534,792 22 (258)	$53,047 07	$587,839 29
Amts. not chg. with gen. ex. dredge-boat Essayons. $66,000 00			
N. O. furniture 1,000 00			
Chromo 1,398 31			
Horses and carriages 250 00			
	145,104 87		
Amt. chg. with gen. ex.	$398,687 35 (277)	$53,047 07	$587,839 29

Rate of gen. ex., 13.628 % (278).

78 September 12, 1877. I submitted to counsel the foregoing printed pages, 1 to 53 inclusive, as a first draft report.

September 21, 1877. The complainant filed with me the paper returned herewith, entitled "Complainant's objections to first draft report and requests."

September 28, 1877. The defendants filed with me the paper returned herewith, entitled "Defendants' objections to first draft report and requests."

October 30, 1877. The defendants deposited with me the assignment returned herewith, marked "Assignment, J. G. S., master."

I find it convenient in printing the papers containing the objections and requests of the parties, respectively, to insert in them notes made by myself. These notes state my action in view of the said objections and requests, and hereby are made a part of this report. I have in these notes considered all the said objections and requests except those stated by defendants under the heads of "depreciation upon tools," and "Glendon." I did not take the view which is claimed by defendants to be the correct view of the manner in which the charges are made in paper *e*, under the head of "labor," item 243, "Glendon, gen. work, 2,384¼ hours, $544.10," and item 245, "Glendon tools, 12,630¼ hours, $2,862.00." Upon the pleadings and evidence before me, I am unable to adopt the said view of defendants, and yet upon consideration of the suggestions of defendants as to said items 243 and 245, and the doubts raised in my own mind by these suggestions as to the correctness of my finding L, I think I ought not to make my report final without such further proceedings as may enable me to arrive at conclusions as to said items 243 and 245, and said finding L, with which I, at least, may be satisfied. I, accordingly, of my own motion, grant leave to the defendants to file with me a statement or schedule showing in detail the Glendon tools upon which the 12,630¼ hours of labor (item 245) were expended in 1868, the cost of each of these tools and the date when purchased; also, a brief statement or description of the nature of the repairs done

on said Glendon tools in 1868, and a statement whether any expenditure for tools used on the wharf Glendon, or for repairs on said tools, is included in any of the items which are marked with letters
79 on schedule *e*, detailed statement of general expenses for 1868, pages 75 and 76 of this report. Upon the filing the statements above named, I will determine what further action, if any, should be taken in the premises.

Respectfully submitted.

JOHN G. STETSON, *Master.*

Complainant's objections to first draft report and requests.—Filed September 21, 1877.

Complainant's objections to first draft of master's report, and his requests to report additional special findings in connection therewith.

1. That the master charges the Essayons with a portion of the general expenses of defendant for a time long previously to the commencement of the building of the Essayons, and long subsequently to its completion.

Request.—To report specially the time of commencement and of finishing the essayons.

Master's note No. 1.—The Essayons was commenced Oct. 20, 1867; was practically finished June 30, 1868, and was delivered to the agent of the United States at New Orleans Aug. 8, 1868.

2. That the master charges the Essayons with a portion of insurance and taxes for the year 1867, being items 205, 206, 207, 208, 229, 230, 234, found on pages 58 and 59.

Request.—To report specially at what time in the year the taxes referred to were assessed or deemed and conceded to have been assessed.

Master's note No. 2.—The taxes referred to were annual taxes, assessed as of May 1, and payable Nov. 1 of the year for which said taxes were severally assessed.

3. That the master charges the Essayons with a portion of the salaries (being items 222 and 246, on pages 58, 59, and 63) of offi-
80 cers and employés of defendants, who were at the same time, while so employed, members of the defendant corporation, and owners of large amounts of stock therein.

Request.—To report specially the whole amount of stock of the company; the number of owners of stock in 1867, and also in 1868; the names of the persons so owning stock whose salaries are included in said items 222 and 246, with the amount of stock they severally own in each of said years, and the amount of salary of each included in said items 222 and 246 severally.

Master's note No. 3.—The capital stock of the Atlantic Works is divided into fifteen hundred shares, and was held by eight parties in 1867, and by the same parties, or their heirs, in 1868. Nelson Curtis held two hundred and fifty-five (255) shares, and received a salary of $3,000 a year as treasurer, or as general agent, during 1867 and 1868. Oliver Edwards held three hundred and ten (310) shares, and received a salary from Jan. 1 to Sept. 12, 1867, at the rate of $3,000 a year.

4. That the master has erred as to the sums taken for his first and second terms of the proportion on page 67, whereby he determines the sum which he finds chargeable to work done on the Essayons in 1868, on account of the general expenses of defendants for that year, and in the following particulars:

a. The first term included $142,456.56, or thereabouts, which should be excluded.; *and the second term, $66,000, which should be excluded.

Request.—That the whole of the paper "*f*" be filed with the final report, and that at least all of the last page thereof, or so much thereof as would make one page in print, should be printed as part of the report; and that he specially find and report when and for what purpose said paper "*f*" was made.

Master's note No. 4.—I return into court with my report, paper *f*, that the same may be within the control of the court, but I do not
81 make said paper *f* a part of my report. I annex to my report a copy of the last page of said paper *f*, marked "Copy of last page of paper *f*, J. G. S., master."

Paper *f* was made by the Atlantic Works, or their agents, soon after the close of the year 1868, for the purpose of ascertaining and exhibiting the results of said year's work as indicated by the heading of said paper.

When the same was filed before him as master:

Master's note, No. 5.—Paper *f* was filed with me Dec. 21, 1876, during the examination of Nelson Curtis, agent of the defendants, upon the account filed by him as such agent, and before the filing of complainant's charge.

When and how "rate of 'general expenses' 13.628 per cent." was ascertained:

Master's note, No. 6.—The rate of general expenses, 13.628 %, was ascertained, when paper *f* was made, by dividing the "Net amount of general expenses, $53,047.67" (276) by the amount chargeable with general expenses, $389,687.35 (277) and multiplying the quotient by 100. The percentage resulting from this operation should be 13.612 instead of 13.628.

Whether the hull was built by the defendant company, or at its works:

Master's note, No. 7.—The hull was not built by the defendant company, or at its works.

Whether it was not built by an outside party, on contract, at a stipulated price, and for what price:

Master's note, No. 8.—The hull was built for the Atlantic Works by an outside party, on contract, for the stipulated price of sixty-six thousand dollars ($66,000).

For what reason, as testified in behalf of defendants, said $66,000 was excluded and not taken into account in determining the proportion of general expenses for 1868, chargeable to the Essayons:

Master's note, No. 9.—The reason given for not including said $66,000 in the amount chargeable with general expenses for 1868,
82 was that the said hull was not built at the works of the defendant company.

Whether that reason was not also—or substantially that—filed with the master in writing by defendants' counsel; and to incorporate in the report the reason so given, in writing, for excluding said $66,000 and for not excluding also certain other items claimed to be excluded in behalf of plaintiff:

Master's note, No. 10.—The Atlantic Works in making paper *f*, to obtain the amount chargeable with general expenses deducted from the total cost of all jobs for the year 1868 those which they did not do at their own works, but contracted with other parties to perform. The cost of comparatively small matters contracted for, but connected with work done at their works, was not so deducted.

Whether there was any evidence that any mistake or error was made

on the part of or in behalf of defendants, in excluding on the last page of "*f*" "$145,104.35," and in excluding said $66,000 from the "$176,547.76," named in said paper as work done on the Essayons in the year 1868:

Master's note, No. 11.—No, there is no evidence that the defendants made any mistake in the matter. They made their calculation for their own purposes, and for aught appears it served those purposes well.

Whether there was anything more than a mere suggestion of counsel in reply to complainant's claim that sundry other items should have been excluded, that this might have been improperly excluded:

Master's note, No. 12.—In reply to complainant's claim that sundry other claims should have been excluded from the amount chargeable with general expenses upon the same principle that the $66,000 was excluded, it was suggested that perhaps this $66,000 had been improperly excluded.

Whether in fact the defendants did any work whatever on the hull for which, or on account of which, said $66,000 is included as above:

Master's note, No. 13.—No, if by "work," artisan labor is referred to.

The full amount of contract price paid by defendants for the
83 hull, and if there was any amount of work done by defendants upon the hull in fitting any of the machinery or other parts thereto, what amount; whether it was not trifling and less than the difference between said $66,000 and the contract price paid for the hull:

Master's note, No. 14.—The contract price was $66,000; the amount actually paid by defendants to the contractors for the hull was $66,200.24, the $200.24 being for certain extra work. The defendants put the machinery into the hull, and doubtless did some work on both machinery and hull in fitting them to each other. This does not change the fact that the hull was contracted for as a whole, and was built complete and delivered complete to the defendants for the contract price with a slight addition thereto for extra work.

b. That the master has included in each of said two terms the item on page 33, called "Commissions," amounting to $5,575:

Request.—To report specially whether such is not the fact; unless (as complainant's counsel supposes) this was by inadvertence and should be corrected:

Master's note, No. 15.—Counsel for complainants is correct in supposing that I inadvertently included in each of the first two terms of the proportion on page 67, the sum of $5,575 referred to in this report as commissions. This error will be corrected hereafter when I have determined the questions raised by the objections filed by defendants concerning the "Glendon" items, 243 and 245.

c. That the master has included in each of said two terms, the following items found on pages 30, 31, 33:

Patent fees on condenser	$745	20	(50)
Detailed drawing	596	70	(42)
Repairs at New Orleans	46	00	(52)
Towing and pilotage	313	59	(119)
Insurance	4,551	50	(120)
Voyage	7,824	31	(127)
Dockage and wharfage	770	30	(128)
U. S. excise tax	446	00	(131)

84 *Request.*—To report specially whether these several items are not included in said two terms:

Master's note, No. 16.—Yes.

Whether complainant's counsel did not specially claim that none of them should be taken into account in determining the portion of general expenses for 1868 which should be borne by the Essayons:

Master's note, No. 17.—Yes.

Whether any labor and what was done at defendants' works in connection with these items:

Master's note, No. 18.—No, if by "labor," artisan labor is referred to.

What voyage is referred to above:

Master's note, No. 19.—The voyage of the Essayons from Boston to New Orleans, previous to the delivery of the same to the agents of the United States.

Where and when the towing, pilotage, dockage, and wharfage, above referred to, arose or took place?

Master's note, No. 20.—During said voyage and at New Orleans.

JOHN S. ABBOTT,
Complainant's Attorney.

Defendant's objection to first draft report and requests.—Filed September 28, 1877.

Objection.—To the requirement of the master that the defendants should assign to the complainants the defendants' claim upon the United States for extras, or as an alternative, the statement that the master will amend his general finding of profits by the amount of said claim.

Request.—The defendants request the master to strike out from his report so much thereof as is contained on page 54 of the printed copy thereof relating to this subject, and to substitute therefor a finding that the complainant is not entitled to any sum for or on account of the claim made by the defendants upon the government for extras.

85

Master's note, No. 21.—I cannot comply with this request.

The defendants further request that the words "a just," in the second line upon page 54 of the draft report, may be stricken out and the words "an equitable" substituted therefor, and that the following additional statement of claim by the defendants as was claimed before the master may be inserted, viz:

It was also contended by the defendants that this question as to extras was not open before the master, the only question for him to determine being that of actual profits, and the United States attorney also claimed that under the contract and specifications, the defendants had no just claim for the extras.

Master's note, No. 22.—My draft report may be considered as amended as above requested.

Objections.—The defendants object to the findings B and C.

Request.—The defendants request the master to find that the defendants should be allowed in the account the sum of $5,575, being item 124 on page 33 of the draft report; and to change finding C by the substitution of $200,922.16 for the sum of $195,347.16 therein stated.

Master's note, No. 23.—I cannot comply with these requests.

They further request the master to change the statement of facts in regard to the subject of commissions in his report, by striking out all after the words "well satisfied," in the nineteenth line on page 55 of the master's report to the end of the paragraph on page 56 of said report, and substituting therefor the following:

Devereux represented that this army officer, who subsequently turned out to be Gen. M. D. McAlester, had another friend who had previously been an army officer, but who was at that time the manager of the Novelty Iron Works of New York, upon whom he placed such
86 dependence that he was at that time having prepared the plans and specifications of the proposed dredge-boat by this friend at the Novelty Works, and that it would require a strong influence to take him elsewhere to procure his work, as his (McAlester's) reputation in a sense depended upon it, McAlester being, as he claimed and as Devereux stated, the inventor of the plan to be used. Devereux stated that he thought that he could bring influence to bear to obtain the work for the Atlantic Works provided he was personally satisfied that the Atlantic Works were competent to do it. The matter was referred by Mr. Curtis to the president and directors of the Atlantic Works, who authorized an agreement to pay Devereux and Ruddick a commission of 2½ per cent. upon the amount of the contract, if such contract should be obtained this being the amount of the commission usually paid between individuals for similar services; and such verbal agreement was made. Some days before the publication of proposals some officers of the Atlantic Works, by means of this information, went to New York and examined the plans and specifications and began to prepare their estimates for the work. Subsequently proposals for building the dredge-boat, a copy of which are hereto annexed, dated September 19, 1867, appeared in the Boston Daily Advertiser. Their first publication was Sept. 23, 1867. The number of establishments in the country capable of performing such work was limited, and during the war they had been pressed to their utmost capacity, but at this time the demand for large vessels and heavy work of this character was greatly diminished, and there was a very brisk competition for obtaining this vessel. The Atlantic Works put in a bid some twenty thousand dollars lower than any other bid. The bids were opened at the time and place stated in the proposals, namely, Oct. 12, 1867, at Gen. McAlester's office in New York, and the contract was awarded to the Atlantic Works, the president of the Atlantic Works, Devereux, and probably Ruddick, and others being present. Some time after the contract was signed, the memorandum returned herewith marked "Certificate for Commissions, J. G. S., master," which was merely putting in writing the previous verbal contract, was signed, and payments were duly made by the Atlantic Works as indorsed on said certificate for commissions.

87 *Master's note, No.* 24.—The above statement, which I am requested to substitute for the latter part of the paragraph commencing on page 31 of my report, is generally substantially correct and states the facts more in detail than I had stated them. On comparing this statement with mine, I find but one matter as to which there appears to be a conflict between the two statements, and but one phrase in the statement presented by defendants with which I am not satisfied upon the evidence.

First, as to the apparent conflict. In my report are these words: "Devereux stated that he thought he could bring influence to bear to obtain the job for the Atlantic Works, provided his friend having the sole control thereof, was personally satisfied that the Atlantic Works were competent to do it." In the proposed substitute, the proviso reads thus: "Provided he" (meaning Devereux) "was personally satisfied that the Atlantic Works were competent to do it." The evidence supports the form of statement presented by defendants, which is in almost the exact words in which Mr. Curtis, when being examined as a

witness, narrated what Devereux stated. Mr. Curtis added, however, "I think he said, 'I am satisfied through my friend, Mr. Ruddick, that you are fully competent.'" Mr. Curtis also testified on this matter substantially, as follows:

"It was represented at this interview by Devereux that this was a difficult thing to do; that to influence Gen. McAlester away from the Novelty Iron Works, where he was then located, could only be accomplished through strong representations by a party who had great influence; that he had such an intimacy and access to the general, that he considered his representations would have equal weight to those of the superintendent of the Novelty Iron Works.

"I think he stated that he was satisfied through what he had seen, and through what Mr. Ruddick had told him, that we were competent, mechanically and financially, to do the work, and that he could, in good faith, so represent to Gen. McAlester, which would put us on an equal footing with the Novelty Iron Works."

In view of this testimony, and in view of the fact that Devereux was the person who thought he could bring influence to bear upon Gen. McAlester to obtain the work for the Atlantic Works, and the fact that Devereux had already stated that Gen. McAlester had sole control
88 of the matter and must and would give out the contract for building the proposed steam dredge-boat to some party of whose ability, financially and mechanically, he, McAlester, was well satisfied, I framed the sentence in my report referred to as I did, incorporating in it an inference from what it appeared in evidence that Devereux stated instead of using the exact words which the evidence tended to show him to have used.

Second, as to the phrase in the statement presented by defendants, with which I am not satisfied upon the evidence, I refer to the phrase "this being the amount of commission usually paid between individuals for similar services." It was in evidence that it was customary among merchants and business and manufacturing corporations to pay commissions to parties for influencing business. The usual rate of such commissions was not proved.

I cannot adopt the phrase "for similar services," as I am of the opinion that the services for which commissions are claimed to have been paid in this case, were of an extraordinary character. Said services are sufficiently described in this report to enable the court to determine whether the defendants should be allowed as a proper expenditure on account of the construction of the Essayons, such commissions as they paid Devereux and Ruddick for said services pursuant to the contract entitled "certificate for commissions," returned herewith.

Request.—The defendants request the master to print the proposals for the dredge-boat issued by the United States.

Master's note, No. 25.—A copy of the proposals for the dredge-boat issued by the United States is returned herewith, marked "Proposals for dredge-boat, J. G. S., master."

GENERAL EXPENSES.

The defendants request the master to insert upon page 32 of his draft report, after the sixth line from the bottom, the following:

These papers were made at the Atlantic Works immediately after the expiration of the years to which they respectively relate, in the regular course of the business of that corporation, and without reference to this suit.

89 *Master's note, No.* 26.—My draft report may be considered as amended, as above requested.

That items 326 and 333 on page 58 may be marked with a *, this having apparently been omitted by mistake; also, that the word "not" may be inserted before "marked," in the 10th line on page 59.

Master's note, No. 27.—Yes, both these corrections should be made in the draft report, and may be considered as made.

ADVERTISING.

The defendants object to the master's refusal to allow the defendants for the payment for the picture of steamer Voyageur, item No. 214, and request that the same may be allowed, the testimony of Mr. Smith being distinctly that this was procured and used as an advertisement.

Master's note, No. 28.—I decline to change my report upon consideration of this objection.

DEPRECIATION UPON TOOLS.

Objection.—The defendants object to the master's disallowance of items 217 and 239, depreciation upon tools, and contend that such disallowance is incorrect, and request that these items should be allowed.

The amounts expended for repairs of tools were only such as were necessary to cover breakage, and to keep the tools in condition for daily use. The depreciation of the tools, notwithstanding the repairs, and in addition thereto, was charged from the known fact that tools are worn by use as well as deteriorated by exposure to an extent beyond that made up by mere repairs. The old tool, although in repair, is not the equivalent of the same tool when new. It is a well-known fact, also, that tools depreciate from a change in style or improvements in mechanism. All of which must be met by an annual charge for depreciation, or the owner of the tools at the end of a given year will, upon taking an account of his property, find that he has not a new dollar for an old one, and that he has on hand at the end of a series of years a quantity of useless and valueless tools.

90 The difference between the case of Rubber Co. v. Goodyear, 9 Wall., 788, and the present case is, that in the former, the court find that the allowance for repairs was more than enough also to cover the wear and tear which could have accrued during the time of the infringement, whereas, in this case, only amounts actually expended in repairs are charged as such, and the allowance for wear and tear is included in the charge for depreciation.

Master's note, No. 29.—Consideration of the matters above presented is reserved to my next draft report.

GLENDON.

Objection.—The defendants object to the disallowance of items 243 and 245, and request that the same be allowed.

The master's conclusion that the expenditures shown by these items were made on account of additions to defendants' plant is erroneous, as will be seen by an examination of the manner in which the charges are made. On page 76 of the draft report under the head "Labor," appears the item 243, "Glendon, general work, 2,384¼ hours, $544.10." General work is previously charged in the other shops of defendants, distributed among the machinists, boilermakers, draftsmen, smiths, and

patternmakers. Then comes the charge to Glendon, which is another shop, or part of the Atlantic Works, and in which machinists, boilermakers, draftsmen, smiths, and patternmakers labored. This charge, "Glendon, general work," is the aggregate of the hours devoted by these different classes of mechanics at Glendon to general work, and was not distributed among the various classes of machinists, boilermakers, draftsmen, smiths, and patternmakers, because the account of the labor at Glendon was not distributed into subdivisions as at the other shops of the Atlantic Works. The same explanation holds in regard to item 245, "Glendon tools, 12,630¼ hours, $2,862," which means labor on tools by those several classes of mechanics at Glendon which cannot be charged to particular jobs, and therefore must be charged to general expense. It appears that all this work was done for the keeping up of the tools at the Glendon, and not for obtaining new tools as an addition to the plant. It appears from *f*,
91 that of the $389,687.35, the total value of the work (actual cost) done by the Atlantic Works in 1868, $218,613.31 was the actual cost of the iron vessels Novelty and William Lawrence, heavy work, mainly built at Glendon. It will, therefore, be seen that the amount charged for keeping up the tools at Glendon is not large as compared with the other shops or parts of the establishment, the proportion being in favor of Glendon.

We suppose that in consequence of this the master will change his findings in this respect, but if he does not do so, we request that he will print so much of *f* as is referred to herein, or in some manner verify as facts the above statements.

Master's note, No. 30.—Consideration of the matters above presented is reserved to my next draft report.

General request.—The defendants request that the master will cause his general findings on pages 65, 66, and 67, to conform to the requests hereinbefore made.

Master's note, No. 31.—Consideration of the above request is reserved to my next draft report.

Further objection and request.—The defendants further object that in no event can damages or profits be recovered against them beyond nominal damages, for the reason that in constructing said dredge-boat they were the mere agent and instrument of the United States, and acted not upon their own account, but solely on account of and under the direction of the United States; and they request the master so to find, and to find generally that, upon the facts in the case, the defendants have made no profits for which they can be held in law or equity accountable to the complainant.

Master's note, No. 32.—I make no change in my report upon consideration of the above objection and request.

GEORGE P. SANGER and
ROBERT R. BISHOP,
For the Defendants.

92 *Copy of last page of paper f.—J. G. S., master.*

[Statement continued.]

	Actual cost.	Added.	Total.	Receipts.	Profit.	Loss.
Amounts brought forward..	$316,178 91	$31,003 36	$347,182 27	$332,523 62	$17,680 94	$11,598 57
Brig Novelty	51,450 51	3,986 15	55,436 66	45,000 00		10,436 66
Steamer Wm. Lawrence	167,162 80	18,057 56	185,220 36	168,250 00		16,970 36
Total amount for the year ..	$534,792 22	$53,047 07	$587,839 29	$545,773 62	$17,680 94	$39,005 59
Am'ts not charg. with gen. ex.:						
Dredge-boat Essayons.	$66,000 00					
St'm'r Wm. Lawrence..	34,567 32					
Brig Novelty	22,166 77					
N. O. furniture	1,000 00					
Ranlet Manuf'g Co	682 85					
Chromo	1,398 31					
Locomotive car No. 1 ..	8,000 00					
Cooper, Hewitt & Co ..	1,800 00					
Steamer Quinsigamond	8,855 82					
Horses and carriages ..	250 00					
R. F. C. Hartley	383 80					
	145,104 87					
Am't charg. with gen. ex.	$389,687 35	53,047 07	587,839 29	545,773 62	17,680 94	39,005 59
Less steamer Quinsigamond			8,855 82			8,855 82
	$389,687 35	$53,047 07	$578,983 47	$545,773 62	$17,680 94	$30,149 77
Balance of loss					12,468 83	
					$30,149 77	$30,149 77

Rate general expenses 13.628 per cent.

93 *Proposals for dredge-boat.—J. G. S., master.*

PROPOSALS FOR DREDGE-BOAT.

OFFICE UNITED STATES ENGINEER AGENCY,
No. 7 BOWLING GREEN, NEW YORK CITY,
September 19, 1867.

The undersigned hereby invites sealed proposals for building and equipping ready for sea and for work, the first of the two dredge-boats (authorized by joint resolution of Congress, approved March 29, 1867) for improving the mouth of the Mississippi River, in accordance with models, drawings, and specifications visible at this office, and instructions to be furnished by the engineer in charge; the dredge-boat to be delivered at such point in the Mississippi River, at or below New Orleans, as the engineer in charge may direct. The dredge-boat to be a double-ender, 160 feet long, 30 feet beam, and 22 feet high, measured from the bottom of the keel to the surface of the spar deck at amidships; to have a screw propeller at each end, one of which is to be 14 feet diameter, driven by two engines, and the other 12 feet diameter, and driven by one; to be fitted with water compartments for readily adjusting the draft to any depth from 14 to 20 feet; to be fitted with an auxiliary scraper at each end; and many of the parts to have a strength considerably exceeding that of like parts of steamers of like dimensions designed for ordinary ocean navigation. During the construction of the dredge-boat reasonable facilities for inspecting the materials and workmanship must be afforded the officer or agent appointed for the purpose. The dredge-boat to be propelled throughout her sea voyage between the points of construction and delivery by her own engines alone.

Bids which do not cover the entire construction and equipments ready for sea and for work of the dredge-boat and her delivery at the

point designated, will not be considered. No bids will be considered except from those practically engaged in the construction of ocean steamers, or screw-propeller machinery for the same, and who have personally inspected the model and drawings of the dredge-boat, or employed experts for the purpose of informing them of its character.

Bids to be indorsed (on the envelope) "Proposals for dredge-boat," and addressed to the undersigned, at this office. Each bid must
94 be accompanied by a guaranty, signed by two guarantors, that the bidder will enter into contract as herein stated, and a certificate of the responsibility of the guarantors, and specifying the occupation of the bidders, signed by an officer of the United States Corps of Engineers, or some other competent person known to the undersigned. Proposals will be received till 12 m. on the 12th day of October, 1867, at which time they will be opened. The contract and bond must be signed by the 14th day of October, 1867; work must be actually begun on both hull and machinery by the 20th day of October, 1867; the boat must be completed ready for sea and for work, and the trials and trial trip had by the 31st of March, 1868; and no unnecessary delay thereafter must occur in her delivery at the point designated. Payments will be made as follows: forty per cent. of the contract price on launching the boat and completion of the boilers and the cylinders of the three propeller engines, provided all these shall have been duly approved; thirty-five per cent. on approval of the boat, after completion of all its parts, ready for sea and for work, by the duly authorized officer or agent of the United States, all the trials and the trial trip having been had, provided the terms of the contract shall thus far have been complied with, and the balance on final acceptance at the point of delivery. Bonds for the faithful performance of the contract in the sum of $25,000 will be required, with two sureties, whose sufficiency must be certified by the clerk of the nearest district court, the names of the sureties, with the certificate, to be submitted with the bid. A full copy of the specifications and of this advertisement must be attached to each bid. The bids and guaranties must be made out on the printed forms to be had at this office. Model and detailed drawings can be seen, and copies of specifications had at this office. Copies of the specifications can also be seen at the United States Engineers' offices in Philadelphia and Boston. The government reserves the right to reject any and all bids. In order that no time may be lost after the contract shall be signed, full detailed drawings of all parts of the dredge-boat are in progress, and will be in readiness to turn over to the contractor, so that work may be begun without delay on account of preparation of working drawings.

M. D. McALESTER,
Brevet Brig.-Gen., U. S. A., Maj. of Eng's,
In charge Improvement Mouth of Miss. River.

95 *Assignment.—J. G. S., master.*

The Atlantic Works to Edwin L. Brady.

The Atlantic Works, a corporation under the laws of the commonwealth of Massachusetts, for value received, hereby assigns to Edwin L. Brady, now or recently a resident of Stamford, Connecticut, its claim against the United States of America for extras furnished by it in the construction, etc., of the dredge-boat Essayons, under articles of agreement dated October 15th, 1867, between M. D. McAlester and said cor-

poration, amounting to three thousand seven hundred and seventy-five dollars and thirty-one cents ($3,775.31).

Said Brady is hereby authorized to adopt any suitable measures to collect the same, and to appropriate what may be received to his own use, but said corporation is not to be subjected to any costs, expenses, trouble, or charges arising from any attempt to collect the same, nor is said corporation to be held accountable as to the validity of said claim, but the same is taken wholly at the risk of said Brady.

The assignment is executed on account of the draft of the master's report submitted to counsel September 12, 1877, in the case of said Brady in equity v. said corporation, pending in the circuit court of the United States, district of Massachusetts, the part of said draft report relating to said claim for extras reading as follows:

"Defendants' claim for extras.—Besides the receipts mentioned in finding A, the defendants have a claim against the United States of America for extras furnished by them in the construction, etc., of the dredge-boat Essayons, under the articles of agreement, a copy of which is returned herewith, marked Exhibit "Dredge-boat contract, J. G. S., master," amounting to three thousand seven hundred and seventy-five dollars and thirty-one cents ($3,775.31). Much evidence was introduced before me touching these extras, and much argument was made as to the legality and equity of the claim for compensation therefor, and as to the value of such claim to the defendants. It was contended by the complainant that the defense of this action has been assumed by the United States, and I find such to be the fact. It was also contended by the complainant that the United States would
96 make good to the defendants such sums as they should be required to pay by the decree of this circuit court, in this cause, and that to avoid circuity of action and multiplicity of suits, this claim of the defendants against the United States should be passed upon by me and found good to the full amount thereof, and treated as so much of value in the hands of the defendants from their construction of the infringing dredge-boat. I cannot, however, assent to this proposition of the complainant. This suit is against the Atlantic Works. The complainant can collect the amount which may be awarded him as profits and costs of suit by the decree of this court, in this case, from the Atlantic Works alone. The United States, by their agent, have so far refused payment to the Atlantic Works of their said claim for extras, and as the United States are not a party to the record in this case, no action of mine, or of the court in confirmation thereof, can prejudice the United States as to the position they have so far maintained with respect to said claim for extras. It was contended by defendants that, although their claim for compensation for extras was a just one, the difficulties connected with a proper presentation of the same, and the expense of such presentation, are such and the result so uncertain, that the said claim has no estimable value. This may be true, and yet upon the proofs relating to said claim before me, I cannot but conclude that the United States would pay the same upon the presentation thereof, accompanied with the same proofs exhibited before me, unless the United States have some legal or equitable defense to said claim, or to some part thereof, not made known to me in this hearing.

"Under the peculiar circumstances connected with said claim of the Atlantic Works, the defendants, for compensation from the United States for extras furnished by them, I am of the opinion that they should assign the same to the complainant as part of the profits to

which he is entitled upon this accounting. Such assignment may be deposited with me for the complainant within ten days after a draft of this report is submitted to counsel. If such assignment is not made, I will amend my general finding of profits in this case by adding thereto the amount of said claim, three thousand seven hundred and seventy-five dollars and thirty-one cents ($3,775.31)."

This assignment is deposited with said master to be by him re-
97 turned into said court with his report in said case, and to be subject to the order of said court as to the time when and the conditions under which it shall be, on the one hand, delivered to said Brady, or, on the other hand, surrendered to the said Atlantic Works.

In witness whereof the said corporation, by Abishai Miller, its president, duly authorized thereto, has executed this instrument this twentieth day of October, A. D. 1877.

THE ATLANTIC WORKS, [L. S.]
By ABISHAI MILLER, *President.*

Executed in presence of—
ALFRED G. COX.

Proceedings upon submitting second draft report.

December 1, 1877, I submitted to counsel the foregoing as a second draft report.

December 17, 1877, the defendants filed with me the paper returned herewith, entitled "Statement of defendants under leave of master, p. 78."

February 11, 1878, the complainant filed with me the paper returned herewith, entitled "Requests by complainant's counsel."

February 15, 1878, I notified counsel for both parties that I would hear them upon the claim of counsel for complainant, stated in the paper entitled "Requests of complainant's counsel," in these words:

"But he claims that a portion of the statement" (referring to the statement of defendants under leave of master, p. 78), "cannot properly be received under the leave granted; and that, under the statement, or so much thereof as is receivable under the leave granted, no change should be made in the master's report."

February 19, 1878, counsel were fully heard before me, pursuant to my notice of February 15, 1878.

I have inserted in the paper entitled "Requests by complainant's counsel," notes by myself stating my action in view of the requests, and I hereby make these notes a part of this report.

I now resume the consideration of the objections of defendants to my first draft report, as stated on pages 89, 90, and 91, under the heads of "Depreciation upon tools," and "Glendon."

98 *Depreciation of tools.*

Upon a careful consideration of the objection of defendants as stated under this heading, on pages 89 and 90, I do not think I should change the conclusion to which I had come, as stated on pages 62 and 63, and summed up in finding I. In my judgment, a sufficient amount has been claimed by defendants and allowed in the items marked with letters on schedules "E" and "*e*," as printed herewith, to cover all the wear and tear and depreciation of tools which the defendants are entitled to have allowed them upon this accounting. Depreciation of tools "from a change in style or improvements in mechanism" cannot

be made a charge against profits upon an accounting for an unlawful use of a patented invention.

Glendon.

Upon a careful consideration of the objection of defendants under this heading on pages 90 and 91, and of the statement filed by defendants under the leave granted them, I am satisfied that my finding L, on page 64, is incorrect, and I accordingly revise it as follows:

Amended finding L.—I allow, as proper expenditures to be included by the defendants in general expenses upon this accounting, the sums claimed by them to have been expended, specified in items 243 and 245, "Glendon."

The above correction of finding L, and the correction of the error referred to in "Master's note, No. 15," page 83, necessitates so many changes in pages 66 and 67 of my report, that I now strike out said pages 66 and 67, and substitute therefor the following:—

99 *Apportionment of general expenses for* 1868.

The net general expenses of defendants for 1868, as claimed by them, shown by paper *e*, detailed statement of general expenses for 1868, are		$53,047 07	(255*a*)
Of these general expenses I have disallowed, by my findings heretofore made, the following:			
Finding F, item 240, chromo, in part, namely	$400 00		
Finding I, item 239, depreciation of tools	2,858 40		
Finding K, item 238, new office furniture	658 53		
Total disallowed		$3,916 93	(256*a*)
Deducting from the amount claimed by defendants the amount disallowed by me and there remains, to be taken as the general expenses of defendants in the management of their business for 1868, the sum of		$49,130 14	(257*a*)
The total cost of all jobs for the year 1878, done by the defendants, as shown by paper *f*, statement showing cost, profit, and loss, on all jobs for the year 1868, is		$534,792 22	(258*a*)
In this sum are included certain expenditures which should not be included, and which I therefore deduct as follows:			
New office furniture	$1,000 00		
Chromo	1,398 31		
Horses and carriages	250 00		
Commissions, item 124	5,575 00		
		$8,223 31	(259*a*)
There remains to be taken as the cost of all jobs done by defendants in 1868, chargeable with general expenses for that year, the sum of		$526,568 91	(260*a*)

100 The cost of what was done upon the dredge-boat Essayons in 1868, as shown by said paper *f*, is $176,547 96 (261*a*)

From which deduct the amount paid as commissions, and disallowed by me, as per finding B..... $5,575 00

There remains to be taken as the cost of work done on the Essayons in 1868, chargeable with general expenses for that year, the sum of..... $170,972 96

I make the following proportion:

Total cost of all jobs done in 1868, chargeable with general expenses.	Cost of work done on Essayons in 1868, chargeable with general expenses.	Total general expenses for 1868.	General expenses chargeable to work done on Essayons in 1868.
$526,568 91	$170,972 96	$49,130 14	$15,952 18 (262*a*)

The percentage of general expenses upon the cost of jobs done by defendants in 1868 is 9.3302+. (263*a*.)

AMENDED FINDING N.—I find the general expenses of the defendants for 1868, chargeable to work done on the Essayons, to be $15,952.18. (264*a*.)

Amended summary.

I charge the defendants with receipts on account of the construction of the infringing dredge-boat Essayons, as per finding A..... $223,716 20

I credit the defendants with expenditures in the construction of said dredge-boat, as follows:

Amount expended directly in the construction of said dredge-boat, exclusive of general expenses, as per finding C.....	$195,347 16	
General expenses for 1867, as per finding M..	5,812 04	
General expenses for 1868, as per amended finding N.....	15,952 18	
Total expenditures.....		$217,111 38

The difference, being profits, is..... $6,604 82

AMENDED GENERAL FINDING.—I find that the profits which the defendants have received, or which have arisen or accrued to them

101 from the infringement complained of, and to which the complainant is entitled upon this accounting, amount to the sum of six thousand six hundred and four dollars and eighty-two cents ($6,604.82).

Respectfully submitted.

JOHN G. STETSON,
Master.

Statement of defendants under leave of master, p. 78.—Filed Dec. 17, 1877.

In accordance with the leave granted us in the second draft of the master's report in the above case, we present the following statement in explanation of the items of said report numbered 243 and 245.

The tools in use at Glendon during 1866 were as follows:

FIXED TOOLS.

	When purchased.	Cost.	Inventory prices.
Engine and boiler	1868	$2,950 00	$2,000 00 (279)
Line shafting and belting	1862	1,060 27	200 00 (280)
Edge-planer	"	1,100 00	600 00 (281)
Chocking-lathe	"	200 00	107 20 (282)
Portable engine	1866	950 00	950 00 (283)
4 upright drills	1863	1,200 00	1,000 00 (284)
Large punching-machine	1862	1,100 00	800 00 (285)
" slotting "	1863	2,500 00	800 00 (286)
Medium punching-machine	1862	527 40	475 00 (287)
Small " "	"	225 00	225 00 (288)
Angle iron shears	"	358 00	278 25 (289)
Shearing-machine, large	"	898 78	600 00 (290)
" " small	"	300 00	200 00 (291)
Rolling "	"	1,130 34	800 00 (292)
5 forges	"	175 00	50 00 (293)
Plate-iron furnace	"	.....	150 00 (294)
Angle " "	"	300 00	100 00 (295)
Blower	1863	144 20	50 00 (296)
5 cranes	"	120 00	60 00 (297)
3 derricks	"	320 00	130 00 (298)
Scales	"	50 00	10 00 (299)
2 grindstones	"	40 00	20 00 (300)
Chimney to furnace	1864	100 00	100 00 (301)
	(302)	$15,748 99	$9,705 45 (303)

102 FLOATING TOOLS.

Steel turning tools	1863	$17 50	$10 50 (304)
" drills for laths	"	38 50	23 10 (305)
" chisels	"	146 50	87 90 (306)
" sledges and hammers	"	224 70	224 70 (307)
" drills for drilling-mach	"	291 50	116 60 (308)
" bars	"	14 00	7 00 (309)
Wro't-iron tongs	"	57 36	38 24 (310)
" " wrenches	"	154 83	74 32 (311)
" " pipe dogs	"	175 75	105 40 (312)
" " drill braces	"	16 20	6 75 (313)
" " pinch bars	"	66 00	26 40 (314)
" " bolt tools	1864	25 75	5 15 (315)
" " holding-on bars	"	184 50	36 90 (316)
Steel drifts	"	24 50	9 80 (317)
Wro't-iron anvils	"	249 12	166 08 (318)
Cast-iron formers	"	396 00	297 00 (319)
Stoves	"	60 00	39 34 (320)

2 jack-screws	"	16 00	8 00 (321)
2 1-ton hoisters	"	80 00	30 00 (322)
3 rachets	"	45 00	28 50 (323)
4 vises	"	40 00	30 00 (324)
8 rivet forges	"	80 00	24 00 (325)
4" x 8" blast pipe	"	142 00	30 00 (326)
Coal stove in office	"	12 00	12 00 (327)
Iron truck	"	20 00	3 00 (328)
6 shop wagons	"	120 00	60 00 (329)
4 wheelbarrows		20 00	7 00 (330)
4 ladders		8 00	6 00 (331)
3 benches		15 00	15 00 (332)
2 clocks		8 00	7 00 (333)
16 wooden horses		16 00	4 00 (334)
		$2,764 71 (335)	$1,539 68 (336)

During the year 1868 the Atlantic Works were using the Glendon
103 premises to construct the steamer Wm. Lawrence and the brig Novelty, both iron vessels, and as the premises had been lying comparatively idle for some time considerable labor was needed to put the tools in order for use.

The engine and boiler were put in during the spring of 1868 expressly to run the shops, and the blower and shafting were fitted up for service.

The work done and the tools used were of such a nature that large repairs were needed. Such tools as punches, dies, chisels, tongs, and swedges, which are mainly used in the construction of iron vessels, constantly require repairs. During the construction of two such vessels as the Wm. Lawrence and the Novelty these repairs would require the labor of one smith and helper constantly, and of an additional smith and helper the greater portion of the time, and the total includes also the labor of machinists, pattern makers, boiler makers, &c.

In relation to the items on pages 75 and 76, marked with letters on schedule *e*, we have to state that no part of the 2,384¼ hours on "general work," or of the 12,630¼ hours on "Glendon tools," was included in the items above mentioned.

These facts are verified by an examination of four books entitled "Daily Labor Sheets for 1868," herewith submitted, and which may be examined if desired.

ATLANTIC WORKS,
By NELSON CURTIS.

Requests by complainant's counsel.—Filed Feb. 11, 1878.

In consequence of what appears under defendants' objections, in the last ten lines of page 85, and on page 86 of the master's report, and the response thereto on pages 87 and 88, the complainant's counsel requests the master to report—

1. In what business said Devereux was engaged at and before the interviews and transactions referred to took place, and where that business was carried on at the time.

104 *Master's note, No.* 33.—The evidence does not show in what business Devereux was engaged at the time referred to. He had an office in Doane street, in this city, Boston.

2. Whether there was any evidence that said Devereux was or had

been acquainted with such work as was ordinarily done by the Atlantic Works or at the Novelty Works, or the mechanical skill required in the execution of such work.

Master's note, No. 34.—There was none.

3. Whether there was any evidence that Devereux or Ruddick made any communication to said McAlester as to the competency or ability of the Atlantic Works to construct the proposed dredge-boat.

Master's note, No. 35.—There was none.

4. Whether it was not made to appear, from the evidence, that the Atlantic Works, before proposals were issued for the Essayons, had built for the United States Government, during the late war of the rebellion, two monitors, one called the Nantucket and the other called the Casco.

Master's note, No. 36.—It was so made to appear.

5. Whether said Devereux and Ruddick were not partners in business, and in that business above referred to, in which said Devereux was engaged.

Master's note, No. 37.—Devereux and Ruddick each had an office in Doane street, but whether they occupied the same office, or were partners, I am unable to state from the evidence before me.

6. Whether there was any evidence that the Atlantic Works, in any other instance, paid, or agreed to pay, any commissions or other consideration to any one for influencing any party to employ them to do any work, or to construct any vessel, or perform any job.

Master's note, No. 38.—There was some such evidence, but it was not claimed by defendants that any commissions were ever paid or agreed to be paid for any work done for the United States or their agents, except the commissions in question in this case.

7. Whether there was not evidence that, in at least one instance, influence was used by a party, in a legitimate way, to obtain a large
105 job or contract for the Atlantic Works, and that it was obtained, and that no compensation was paid or promised for such service.

Master's note, No. 39.—This is an immaterial matter and I make no answer.

8. Whether there was any evidence that any bid or proposals were made for the construction of the Essayons excepting by the Atlantic Works and the Novelty Works; and, if so, by whom.

Master's note No. 40.—I am unable to state from the evidence what bids or proposals were made, or by whom made, except the Atlantic Works.

The master is also requested to report whether he was not satisfied from the evidence of each of the following propositions; and if he was not so satisfied, as to any of them, then to report as to such propositions, what his actual conclusions or findings were:

1. That, at and before the proposals for constructing the Essayons were issued, the reputation of the Atlantic Works, as to ability to perform large contracts, such as the construction of the Essayons, had been established, and was extensively known.

2. That, before the time referred to, and during the late war of the rebellion, the Atlantic Works had constructed for the United States Government two monitors, one called the Nantucket and the other the Casco.

Master's note, No. 41.—The evidence before me is sufficient to enable me to find the facts as above stated.

3. That said Devereux and Ruddick, at the time of the transactions by them, referred to, were partners in the coal business in Boston.

Master's note, No. 42.—I am unable to state from the evidence whether Devereux and Ruddick were or were not partners.

As to the "statement of defendants under leave of master," the complainant's counsel has had opportunity to examine the four books referred to; but he is unable to verify the alleged facts by such examination. But he admits the statement, as to the alleged facts, so far as defendants can legitimately claim that it should be received, under the leave granted by the master.

106 But he claims that a portion of the statement cannot properly be received under the leave granted; and that, under the statement, or so much thereof as is receivable under the leave granted, no change should be made in the master's report.

As to the reasons for so claiming, the counsel will (1) submit them in writing before action by the master; or (2) he will appear before the master in connection with defendants' counsel, when each can be heard on this matter; or (3), in case any change should be made by the master, he will make his objections, etc., afterwards, as may be thought best; but he suggests the second mode as the one to be preferred.

JOHN S. ABBOTT,
For Complainant.

FEBRUARY 11, 1878.

Proceedings upon submitting their draft report.

March 15, 1878, I submitted to counsel the foregoing as a third draft report.

March 19, 1878, the complainant filed with me the paper returned herewith, entitled "Complainant's objections to third draft report and requests."

April 16, 1878, the defendants filed with me the paper returned herewith, entitled "Defendants' requests upon the filing of third draft report."

I have inserted in these above-named papers notes by myself, stating my action in view of the objections and requests therein contained, and I hereby make these notes a part of my report.

Respectfully submitted.

JOHN G. STETSON, *Master.*

107 *Complainant's objections to third draft report and requests.—Filed March 19, 1878.*

The complainant respectfully objects to the "amended general finding," on pp. 100 and 101:

1. That nothing is said as to allowance or disallowance of interest, and he requests that the master find and report that interest be allowed on the amount of profits from the times when such profits were received and used by the defendants; and to state the times from which interest should be computed, and upon what sum or sums.

Master's note, No. 43.—I have already reported to the court the facts bearing upon the question of interest. See pp. 68 and 69.

2. That the "claim for extras," referred to by the master on pp. 53 and 54 is not included in the "amended general finding;" and he requests that the same be set forth and added thereto.

Master's note, No. 44.—I have already reported on page 78 that the defendants have deposited with me an "assignment" of their "claim for extras," under the leave granted by me on page 54 of this report.

In view of this assignment, I cannot increase the amount of my "amended general finding" of profits, as I stated on page 54 I should do, if such assignment was not made. This assignment being returned by me into court, as provided by the terms thereof, is subject to the order of court.

The complainant does not waive, but still insists upon the objections heretofore made to the first and second draft of master's report.

JOHN S. ABBOTT,
Complainant's Solicitor.

MARCH 19, 1878.

108 *Defendants' request upon the filing of third draft report.—Filed April* 16, 1878.

The defendants request the master to state what his finding was upon the complainant's objection in the paper filed by him, February 11, 1878, that a portion of the statement filed by the defendants, December 17, 1877, could not properly be received under the leave previously granted by the master, and whether he found that the whole of said paper could properly be so received, and was within the leave so granted.

Master's note, No. 45.—The parties were heard before me, as suggested by counsel for complainant on page 106, in these words, "or (2) he will appear before the master in connection with defendants' counsel, when each can be heard on this matter," but upon the hearing, counsel for complainant did not insist upon his claim that a portion of the statement referred to could not properly be received under the leave granted by me, and I have accordingly considered the whole statement as it is filed, in coming to the conclusions of this report.

LOTHROP, BISHOP & LINCOLN,
Of Counsel for Defendants.

Proceedings upon submitting fourth draft report.

The foregoing having been submitted to counsel for the respective parties as a fourth draft report and no further objections being filed by either party, I now make said fourth draft my final report.

Respectfully submitted.

JOHN G. STETSON, *Master.*

At the same term the following exceptions to the master's report and motion were filed by the complainant, namely:

109 *Complainant's exceptions to master's report and motion.—Filed May* 6, 1878.

And now the complainant presents the following exceptions to the master's report, and the following motion relating thereto:

1. He excepts to the credit of $5,812.04 given to defendants on account of "general expenses for 1867." Page 100.

2. If exception "1" should not be fully sustained by the court, the complainant excepts to the master having included "general expenses" which were incurred in 1867, prior to Oct. 20, 1867, the day on which the construction of the Essayons was commenced. Pages 79, 57, 67.

He also excepts to his having included in "general expenses" for 1867, the following items:—

110	Insurance on buildings and tools,	pages 57, 60	$4,277 50	(204)
	Postage and revenue stamps	" 58, 60	85 92	(326)
City tax,		" "	510 10	(206)
City, State, and county tax,		" "	1,850 70	(207)
Tax on Glendon,		" "	34 88	(208)
Rent,		" "	1,050 70	(209)
Advertising,		" "	1,053 94	(212)
Attorney's fees,		" 58, 62	81 10	(213)
Salaries,		" 58, 63, 80	10,567 71	(222)

3. He excepts to the credit of $15,952.18 given to defendants on account of "general expenses for 1868." Page 100.

4. If exception "3" should not be fully sustained by the court, the complainant excepts to the master having included "general expenses," which were incurred after the dredge-boat had been finished.

He also excepts to his having included in "general expenses for 1868" the following items:

Glendon rent,	pages 58, 60	150 00	(329)
Advertising,	" " "	240 50	(227)
State tax,	" 58, 59, 60	425 08	(229)
State, city, and county tax,	" 58, 60	1,446 68	(230)
Glendon tax,	" "	36 90	(234)
Attorney's fees,	" 58, 62	93 61	(236)
Turkeys at Thanksgiving,	" 58, 62	36 10	(335)
Chromo,	" 58, 60	254 94	(250)
Glendon,	" 59, 98	544 10	(243)
"	" 59, 98	2,862 00	(245)
Salaries,	" 59, 63, 80	11,037 66	(246)

5. The complainant excepts to the master having included in the first and second terms of his "proportion" on page 100 the following items:

111	Hull	$66,000 00	
	Patent fees on condenser	745 20	(50)
Detailed drawing		596 70	(42)
Repairs at New Orleans		46 00	(52)
Towage and pilotage		313 59	(119)
Insurance		4,551 50	(120)
Voyage		7,824 31	(127)
Dockage and wharfage		770 30	(128)
U. S. excise tax		446 00	(131)

Pages 80, 81, 82, 83, 84, 92, and "*f*."

6. That the master has allowed, and given credit to the defendants, $3,775.31, and deducted the same from the moneys received by the defendants, on account of "extras furnished by them in the construction, etc., of the dredge-boat Essayons." Pages 53, 54.

7. That the master has reported, in the event that interest should be allowed by the court, that it should be estimated "from Jan. 7, 1869," instead of from Aug. 14, 1868.

8. That the master reports the amount of profits to which the complainant is entitled, to be $6,604 82

whereas this sum, as claimed by the complainant, should be increased by the addition of the following items:

Under exception "1"	$5,812 44
Under exception "3"	15,952 18

Under exception "6," $3,775.31, less $1,065.21, being moneys received by defendants, January 2 and 7, 1869, page 29... 2,710 10

$31,079 54

To which sum interest should be added from August 14, 1868.

112 MOTION.

And the complainant respectfully requests and moves that the master's report, as to his general finding of the profits to which the complainant is entitled, be amended as above claimed; and as amended, that it be accepted and confirmed; and that a final decree be granted and entered, requiring the defendants to pay to the plaintiff said sum of $31,079.54, with interest thereon from August 14, 1868, and costs.

JOHN S. ABBOTT,
Solicitor for Complainant.

BOSTON, *May* 6, 1878.

This cause was thence continued to the present May term of this court, A. D. 1878, when the following exceptions to the master's report were filed by the defendants, namely:

Defendants' exceptions to master's report.—Filed May 30, 1878.

And now come the defendants in the above-entitled cause and file the following exceptions to the findings of the master and his report.

1. The defendants except to the requirement of the master that they should assign to the complainant their unpaid claim against the government for extras as a condition of his not finding against the defendants for the amount of said claim (pages 53, 54).

2. They except to "finding B," page 56, and claim that they should be allowed as an expenditure in the accounting the sum of five thousand five hundred and seventy-five dollars ($5,575) therein named.

3. They except to "finding C" in this, that the sum of one hundred and ninety-five thousand three hundred and forty-seven dollars and sixteen cents ($195,347.16) therein named, should be increased by said sum of five thousand five hundred and seventy-five dollars ($5,575), making in all the sum of two hundred thousand nine hundred and twenty-two dollars and sixteen cents ($200,922.16), as mentioned in item 148, page 34.

113 4. They except to the disallowance of certain items in making up the general expenses for the years 1867 and 1868, as follows:

The sums disallowed in finding F, page 61.
" " " " " I, page 63.
" " " " " K, page 64.
" " " " " L, page 64. (Subsequently changed by the master and allowed, p. 98.)

And, consequently, they except to "finding M," page 65, which they claim, by the allowance of the above sums, should be six thousand two hundred and twenty dollars and thirty-seven cents ($6,220.37), instead of five thousand eight hundred and twelve dollars and four cents ($5,812.04).

And, consequently, they except also to "finding N," page 67, and "amended finding N," page 100, which they claim by the allowance of

the above sums should be $17,512.12, instead of $15,952.18, as in said "amended finding N."

5. They further except to the master's refusal to allow interest upon the sums paid out by them in the construction of the work in advance of receipts from the government, as is shown by the statement thereof on pages 47 and 48.

And they claim that the findings of the master should be changed in accordance with the above exceptions, so that the account shall stand as follows:

The Defendants, Cr.

By "finding C"	$195,347 16
" allowance of sum named in "finding B," disallowed by the master	5,575 00
" proportion of general expenses for the year 1867, chargeable to the Essayons	6,220 37
" proportion of general expenses for the year 1868, chargeable to the Essayons	17,512 12
" balance of interest upon money paid out by them prior to its receipt	1,882 63
	$226,537 28

114 *The Defendants, Dr.*

To receipts for the construction of the dredge-boat Essayons	$223,716 20
Balance of loss to the defendants from the construction	$2,821 08

And they pray that a decree may be entered for the defendants.

LOTHROP, BISHOP & LINCOLN,
For the Defendants.

This cause comes on to be further heard at this May term of this court, A. D. 1878, upon the exceptions of the complainant and of the defendants to the master's report, and by agreement of parties is submitted to the court upon briefs, and after due deliberation thereon had, on the ninth day of October, the opinion of the court is read by the honorable Nathan Clifford, associate justice, and thereupon the following final decree is entered, namely:

115 *Final decree.*

This cause, upon the coming in of the report of the master, came on to be heard at this present May term, 1878, upon the complainant's exceptions to master's report and motion, and upon defendants' exceptions to master's report, and was argued in writing by counsel for the respective parties.

And now, upon consideration thereof, to wit, October 9, 1878, it is ordered, adjudged, and decreed that both the exceptions of the complainant and the exceptions of the defendants to the master's report be, and the same are hereby, overruled, and that the report of the master be, and the same is hereby, confirmed.

And it is further ordered, adjudged, and decreed that Edwin L. Brady, the complainant, recover of the Atlantic Works, the defendants,

the sum of six thousand six hundred and four dollars and eighty-
116 two cents ($6,604.82), as and for the profits which the defendants have received, or which have arisen or accrued to them from the infringement complained of in the bill of complaint in this cause, as found by the master in his amended general finding, and the further sum of one thousand six hundred and twenty-three dollars and forty-nine cents ($1,623.49), costs of suit.

By the court.

JOHN G. STETSON, *Clerk.*

On the nineteenth day of October, 1878, an appeal is filed in the words following, namely:

And now come the defendants in the above entitled cause, and acting herein by direction of the Department of Justice of the United States, appeal from the final decree entered in this court on the ninth day of October, 1878.

By their attorneys,

GEORGE P. SANGER, *U. S. Att'y.*
AND LOTHROP, BISHOP & LINCOLN.

117, 118 It appearing to the court, the honorable John Lowell, district judge, sitting, that the foregoing appeal is taken by direction of a department of the government, the same is allowed in accordance with section 1001 of the Revised Statutes of the United States, and it further appearing that an appeal is duly claimed in open court upon the settling of the form of the final decree in this cause, which decree is entered as of October 9, 1878, it ordered that all proceedings subsequent to the final decree in this cause be entered of record as of said October 9, 1878.

A true record.

Attest:

JOHN G. STETSON, *Clerk.*

119, 120 The following is the evidence used at the hearing of said cause by said circuit court:

EVIDENCE FOR COMPLAINANT.—TAKEN PURSUANT TO THE 67TH RULE OF THE SUPREME COURT OF THE UNITED STATES, IN EQUITY, AS AMENDED.

Deposition of Israel W. Lamson.

Direct examination by counsel for complainant:

Int. 1. Please state your name, age, and occupation.

Ans. Israel W. Lamson, age 44; occupation, iron work now.

Int. 2. Do you know Edwin L. Brady, the plaintiff in this action; and if so, where did you first know him?

Ans. I do; New Orleans, Louisiana, in the latter part of December, 1865.

Int. 3. State at what place in New Orleans you first met said Brady, and state fully what was then and there said by said Brady in your hearing, respecting getting vessels over the bar at the mouth of the Mississippi, and what plans, if any, said Brady then and there described to you.

(Objection as to form and substance.)

Ans. At St. Charles Hotel, New Orleans. I had purchased a brig then lying near Pass l'Outre, one of the mouths of the Mississippi and asked him what the best method was of getting her off. He proposed backing up a deep draft propeller, making her fast to the brig, and let her work her way; he assuring me that the result would be the sand or mud would be washed away, and she would come afloat. I doubted it, and he stated that in case a propeller would not go over a bar bow first, turn her stern to it, and she would work herself over. He suggested the same method of getting vessels over the bar by agitating the mud or obstruction at the bar. I asked him how he was going to increase the depth of the bar, if he was going to put an agitator on to it; he said by building a vessel that would be capable of being sunk an raisedd
121 at will, he would be able to apply the agitator to any depth. I asked him what means he would adopt for that purpose; he said water would be the cheapest; it would be necessary to have the vessel fitted with compartments which could be filled and emptied at pleasure. I don't know that there was anything further at that time.

Int. 4. State at what time said conversation occurred.

Ans. I think it was the latter part of December, 1865.

Int. 5. What was your business at New Orleans at that time, and how long did you remain there?

Ans. My business was to endeavor to save a steamer that was sunk just below New Orleans, called the Carlotta. I remained there till the 22d of April, 1866.

Int. 6. When and where did you next see said Brady, after the conversation you have heretofore given?

Ans. I used to meet him almost every day, usually at the office of the Atlantic and Mississippi Steamship Company.

Int. 7. Did said Brady show you any drawings or plans for dredge-boats? If so, state when and where, and describe the principles said plans embodied.

(Objected to, for form and substance, and calling for secondary evidence, and counsel for respondent insists that drawings and plans should be produced, and also as asking for the opinion of the witness, and as incompetent, there being no evidence that the witness is qualified to explain.)

Ans. In the course of a week or ten days after this conversation he invited me to his rooms in Bourbon street, and there showed me pencil drawings he had made, embodying his ideas of dredging the bar as mentioned to me in the conversation previously mentioned; said plans embraced an agitator, or something similar to a propeller at the bows, and compartments for water ballast; propelling power was a screw in her stern. I afterwards saw at Capt. Brady's rooms, in Carondelet street, plans of the same idea more fully laid down.

Int. 8. Did you ever have experience in raising wrecked vessels or getting vessels over bars, or any acquaintance with dredge-boats? If so, state what.

(Objected for form, and also as immaterial.)

122 Ans. I was three years manager of a wrecking company, and was practically acquainted with the raising of sunken vessels and property, and for ten years have had knowledge of dredge-boats.

Int. 9. When did you leave New Orleans?

Ans. The 22d day of April, 1866.

Int. 10. Have you had anything to do with dredge-boats and wrecking since you left New Orleans?

(Objected to as immaterial.)

Ans. I have in wrecking, but not in dredge-boats, although I have employed one since that time.

Cross-examination by counsel for defendants:

Cross-int. 11. By whom were you sent to New Orleans at this time, and for what purpose?

Ans. By the Washington and Harmony Insurance Companies of New York, to protect their interests in the steamer Carlotta, then sunk below New Orleans.

Cross-int. 12. Sent out as their agent you mean?

Ans. Yes, sir.

Cross-int. 13. What were you doing in New York before you went there?

(Objected to as irrelevant.)

Ans. Shipping agent for the Delaware, Lackawanna & Western R. R. Co.

Cross-int. 14. How long had you been so?

(Same objection.)

Ans. Eight years.

Cross-int. 15. And prior to that, what had you done?

(Same objection.)

Ans. In the naval store trade.

Cross-int. 16. How long?

Ans. Four years.

Cross-int. 17. And before that?

(Objection—irrelevant.)

Ans. Shipping business in Boston.

123 Cross-int. 18. In what way; what shipping business?

Ans. Having lines of packets to southern ports.

Cross-int. 19. What firm, and to what ports?

(Same objection.)

Ans. John H. Pierson & Co; Philadelphia, Baltimore, Charleston, Savannah, Mobile, New Orleans.

Cross-int. 20. Were you a partner in the firm?

(Same objection.)

Ans. No, sir; only agent.

Cross-int. 21. What were your duties and occupation as agent?

(Same objection.)

Ans. Chartering vessels and securing freight therefor.

Cross-int. 22. Was this visit in Dec., 1865, the first time you ever went to New Orleans?

Ans. Yes, sir.

Cross-int. 23. Had you any acquaintance with Capt. Brady before going there?

Ans. No, sir.

Cross-int. 24. How did you make his acquaintance there?

Ans. Was introduced to him by Capt. Allen, agent of the Atlantic and Mississippi Steamship Company, at the office of the company, at New Orleans.

Cross-int. 25. What was Brady's business at New Orleans at this time?

Ans. Having never seen the man before, could not say.

Cross-int. 26. When were you first introduced to him; how long after your first arrival there?

Ans. About a fortnight; I think I arrived there on the 12th of Dec., and was introduced to him in the latter part of the month.

Cross-int. 27. How often after that did you see him while you were in New Orleans?

Ans. Almost every day.

Cross-int. 28. Do you know of his being engaged at this time in any business or occupation whatever; and, if so, what?

(Objected to as irrelevant and as to form.)

Ans. I do not.

124 Cross-int. 29. Didn't you hear what he was doing in New Orleans at this time?

Ans. No, sir.

Cross-int. 30. So far as you know, then, he had no business or occupation?

(Objected to as irrelevant and immaterial.)

Ans. Yes, sir.

Cross-int. 31. You say you saw him almost every day; where did you use to see him?

Ans. Sometimes at the office of the steamship company, sometimes in Carondalet street, other times at the hotel.

Cross-int. 32. Had he any place of business?

(Objected to as irrelevant.)

Ans. When I wished to find out his whereabouts, I could generally do so at the steamship company's office.

Cross-int. 33. Did he make that his headquarters?

Ans. To the best of knowledge and belief, he did.

Cross-int. 34. Had he any connection with the steamship company?

(Objected to as immaterial.)

Ans. Not to my knowledge.

Cross-int. 35. Had he ever had any such connection?

(Objected to as immaterial and assuming knowledge in the deponent which he has not yet shown.)

Ans. Not to my knowledge.

Cross-int. 36. This brig you speak of, did you buy her on your own account, or how happened you to?

Ans. I bought her on my own account; heard she was for sale and purchased her.

Cross-int. 37. Was she a wreck when you bought her?

Ans. I think she was. I bought her as derelict property.

Cross-int. 38. Of whom?

Ans. Norcross, Perkins & Co.

Cross-int. 39. And then had a talk with Brady as to the best means of getting her off—is that it?

Ans. Yes, sir.

Cross-int. 40. Why did you speak to him about it; was it a casual conversation or were you advised to go to him?

125 Ans. A casual conversation; was not advised to go to him.

Cross-int. 41. A casual conversation when you happened to meet him in the St. Charles Hotel?

Ans. Yes, sir.

Cross-int. 42. And whereabouts in the hotel; can you remember?

Ans. On the verandah of the hotel.

Cross-int. 43. Remember the time of day?

Ans. I think it was evening.

Cross-int. 44 (de bene esse). How did Brady tell you that he knew a propeller would take your vessel off? You say you doubted it. What did Brady say to you to prove that it was so?

Ans. I think he said he had seen it done, or was of the opinion it would do so.

Cross-int. 45 (de bene esse). Didn't he tell you that he had heard or known of steamers working themselves over the bar by the aid of their propellers?

Ans. Not to my knowledge, at that time.

Cross-int. 46 (de bene esse). When did he tell you this?

Ans. It was some time afterwards.

Cross-int. 47 (de bene esse). In New Orleans?

Ans. At New Orleans.

Cross-int. 48 (de bene esse). Didn't he give you the names of some vessels—some steamers that had done it?

Ans. The steamer Missouri, he represented as having done that at the bar at the mouth of the Mississippi, and at his suggestion.

Cross-int. 49 (de bene esse). When?

Ans. I can't fix the date.

Cross-int. 50 (de bene esse). Didn't he name any other vessels as well?

Ans. Not that had done it. Not to my knowledge.

Cross-int. 51. Did you get the brig off in the manner he suggested?

Ans. No, sir.

Cross-int. 52. How did you do it?

Ans. I didn't get her off at all.

Cross-int. 53. Did you try his plan?

Ans. No, sir.

Cross-int. 54. Why not?

126 Ans. Found somebody else had been there before me, and stole her.

Cross-int. 55 (de bene esse). How did Brady happen to show you the pencil drawings which you have spoken of?

Ans. During the conversation in the day time in reference to deepening the bar, he invited me to his rooms in Bourbon street, to see the pencil drawings he had made of his ideas.

Cross-int. 56 (de bene esse). Where did this conversation begin, and when was it, as nearly as you can state?

Ans. At the Atlantic and Mississippi Steamship Company's office, early in January, 1866.

Cross-int. 57 (de bene esse). Who was present?

Ans. No one that I recollect. It was in the office where there was a good many people.

Cross-int. 58 (de bene esse). State how it began; who introduced the subject, and all that was said, as fully and particularly as you can.

Ans. Can't say how the conversation begun. Don't recollect who introduced the subject. Have no distinct recollections of the conversation, otherwise than an invitation to come down to his rooms to see his plans.

Cross-int. 59 (de bene esse). Did you go directly down to his rooms to see his plans? or when did you go?

Ans. Did not go directly to his rooms; was at his rooms in the evening.

Cross-int. 60 (de bene esse). Same day?

Ans. Yes, sir.

Cross-int. 61 (de bene esse). Please describe the plans as fully as you can.

Ans. To the best of my recollection, the agitator at the front of a boat, which agitator, if I recollect right, was in the shape of what I call a portion of a conveyor, such as is used to transfer grain in a mill. The

body of the boat was divided into water-tight compartments for ballasting purposes, and her propelling power a screw. The idea was to agitate the deposit and to be got rid of by current.

Cross-int. 62 (de bene esse). How large was the drawing?

127 Ans. To the best of my recollection it was a piece of card paper two feet long and about fourteen inches wide. (It had evidently been used before, as it was pretty dirty.)

(Objected to as not responsive.)

Cross-int. 63 (de bene esse). What was the drawing, light blue or red?

Ans. I think it was black.

Cross-int. 64 (de bene esse). Please describe, if you can, the agitator more exactly.

Ans. The conveyor to which I compared it, as a portion, was somewhat in the form of an auger, having a spiral on the circumference.

Cross-int. 65 (de bene esse). It was a longitudinal section of a large auger, was it?

Ans. Yes, sir; I'll tell you what it was more like; like a pipe of wine; that is, smaller at the head and larger at the bung, cut in half with a spiral on the outside.

Cross-int. 66 (de bene esse). You mean a longitudinal section?

Ans. Yes, sir; like a cask sawed in two at the bilge with a spiral on the outside.

Cross-int. 67 (de bene esse). How many turns of the spiral were there on this?

Ans. To the best of my recollection, two and a half or three—pretty rank: that is, it takes hold of the material quickly and gets rid of it quickly.

Cross-int. 68 (de bene esse). To use a more scientific term, the agitator was the frustrum of a cone with a spiral on the outside.

Ans. Yes, sir; that is my notion of it.

Cross-int. 69 (de bene esse). How long did you look at this drawing?

Ans. It laid on the table there during my stay, all the evening, and we referred to it from time to time.

Cross-int. 70 (de bene esse). How long were you there?

Ans. I should think I was there two hours and a half or three hours.

Cross-int. 71 (de bene esse). Did you have any talk then about clearing the bar, or deepening the channel at the mouth of the Mississippi?

Ans. I did.

Cross-int. 72 (de bene esse). Please to state fully and exactly.

Ans. I can't do it.

128 Cross-int. 73 (de bene esse). State anything that you remember that was said by anybody at that conversation, or the substance of anything that was said.

Ans. Capt. Brady felt very confident, and so expressed himself, that a machine constructed upon that principle would be able to clear the mouth of the Mississippi, * which at that time was a topic of conversation among the business people of New Orleans, as the bar had become obstructed and many vessels were unable to get in without a great deal of delay; a portion of the obstructions I was personally aware of, having noticed there as I came in over the bar.*

(** Objected to as irresponsive.)

Cross-int. 74 (de bene esse). Do you remember anything else that was said at that conversation?

Ans. A conversation ensued in reference to the chance of getting

that steamboat afloat that I was about to attempt; nothing with reference to the dredging matter.

Cross-int. 75 (de bene esse). Didn't Brady tell you what he proposed to do with these plans?

Ans. No, sir.

Cross-int. 76 (de bene esse). Do you know of his submitting them to any one besides yourself?

Ans. Not of my own knowledge.

Cross-int. 77 (de bene esse). Do you know of his taking any steps to have this plan carried into execution?

Ans. Not to my own knowledge.

Cross-int. 78 (de bene esse). What became of this pencil drawing?

Ans. Capt. Brady put it into his trunk just as I got ready to leave.

Cross-int. 79 (de bene esse). Where was it when you came in?

Ans. He took it out of his trunk.

Cross-int. 80 (de bene esse). By card paper, do you mean Bristol board, or something of that sort on which it was drawn?

Ans. A stiff white paper.

Cross-int. 81 (de bene esse). Where were the water-tight compartments? What part of the vessel?

Ans. Distributed throughout the body of the vessel; room for machinery, fuel, &c., reserved.

129 Cross-int. 82 (de bene esse). Had you any special interest in clearing the bar or opening the mouth of the river?

Ans. No, sir.

Cross-int. 83 (de bene esse). You say you afterwards saw other drawings of Brady's. When was this?

Ans. After Capt. Brady had removed his lodgings from Bourbon to Carondalet street, about six weeks before I left.

Cross-int. 84 (de bene esse). How did you happen to see these drawings?

Ans. Shown them by Capt. Brady.

Cross-int. 85 (de bene esse). How did he happen to show them to you?

Ans. During my acquaintance with Capt. Brady the subject of dredging usually came up in conversation so often, I soon became convinced Capt. Brady was mad or insane on the dredging subject. He invited me to his room. I went. He there showed me other drawing than the one he showed me in Bourbon street. *The same idea elaborated, as I should judge, by the better drawing of the boat, better proportions, &c.*

(**Objected to; not responsive.)

Cross-int. 86 (de bene esse). Describe these drawings, what they were done with, their size, what they were drawn on, and state any differences that you remember in the plan or any details between them and those he first showed you.

Ans. The outlines were ink, either writing or Indian ink. The filling in or change in color looked like a blue and red lead-pencil. The general character of the drawing was similar to that seen in Bourbon street. The water-tanks, engine-room, and fuel-room more definitely defined; and I think the size of the drawing was about the same; it might have been a little larger than the original, drawn on thick white paper; and in one portion of the paper (I think it was the left-hand upper corner) there were two different designs of an agitator, differing from the one attached to the design of the boat. These new designs looked like propeller-wheels used on common propeller tug-boats.

Cross-int. 87 (de bene esse). What was the difference between these two new designs; how did they differ from each other?

130 Ans. I think one was a two-fanned propeller, and the other a three.

Cross-int. 88 (de bene esse). What did Brady tell you about these new drawings?

Ans. He said the reason why he had changed the design of the original agitator, he was afraid that the spiral would get knocked off easily, and it would cost a good deal to replace it.

Cross-int. 89 (de bene esse). What did he propose to substitute?

Ans. One or the other of these new designs, which could be best decided after testing.

Cross-int. 90 (de bene esse). Did he tell you this?

Ans. Yes, sir.

Cross-int. 91 (de bene esse). How did he tell you he proposed to test it?

Ans. He did not mention any particular method.

Cross-int. 92 (de bene esse). Do you know of Brady's submitting these drawings to any one besides yourself?

Ans. Not to my own knowledge.

Cross-int. 93 (de bene esse). Was there any one in New Orleans at this time, who had any charge of deepening the mouth of the Mississippi?

(Objected to as irrelevant.)

Ans. I know of Gen. Newton being down there. I think his name was Newton. I learned this fact from a Mr. Valentine, who was on his staff of engineers, *a man whom I had known north several years. He said Gen. Newton came down to look after the levees and see what could be done to the mouth of the river.*

(**Plaintiff's counsel objects (de bene) as irresponsive.)

Cross-int. 94 (de bene esse). Do you know of Brady's showing his plan to Gen. Newton or bringing it in any way to his attention?

(Objected to as irrelevant.)

Ans. No, sir.

Cross-int 95 (de bene esse). Was there any private person, firm, or company interested or engaged at that time in the matter of the clearing the mouth of the river?

(Objected to as before.)

Ans. Not to my knowledge.

131 Cross-int. 96 (de bene esse). What became of this last plan after you saw it?

Ans. I left it with Capt. Brady, lying on the table at his rooms, in Carondalet street.

Cross-int. 97 (de bene esse). Didn't Brady tell you why he was making these drawings?

Ans. The matter of the deepening the mouth of the Mississippi River was being agitated and continually talked of, and these plans were drawn by Capt. Brady, embodying his ideas of what would deepen the bar; but he never told me of his intention to put them in operation.

Cross-int. 98 (de bene esse). Did he never say anything indicating in any way that he had such intention?

(Objected to as irrelevant.)

Ans. Not to me.

Cross-int. 99 (de bene esse). For all that he said to you, then, or that you know he did about these plans, they were mere fancy sketches which he took no pains and no steps to put into practical operation?

Ans. The sketches were not very fancy, nor did he, to my knowledge, take any steps to put them into practical operation.

Cross-int. 100 (de bene esse). Did he speak of it to you as a plan that he proposed to try?

Ans. The idea conveyed to me was, that it was his belief that a machine constructed upon the principles shown in the drawing, would accomplish the object of deepening the bar at the mouth of the Mississippi River.

(Objected to, as not responsive. Question repeated.)

Ans. He did not.

Cross-int. 101 (de bene esse). Except these two times that you have named, did you ever see any drawings of Brady's?

Ans. Yes, sir; but nothing to do with dredging-machines. Yes, it had; it was a drawing of the Wiggin's Ferry, which he had fitted up, and I have seen other drawings.

Cross-int. 102 (de bene esse). When did you see this drawing of the Wiggin's Ferry?

Ans. In the month of June, 1869.

Cross-int. 103 (de bene esse). Would you please describe it?

(Objected to as irrelevant.)

132 Ans. The old Wiggin's Ferry was a double bodied steamer with a wheel in the middle of her; attached to her bows two heavy frame works of timber suspended by means of chains, capable of being raised and lowered at will, with two agitators, one in each frame upon the plan—the agitator that is—of the original drawing that I saw in Bourbon street; the agitator was worked by chain gear, which Capt. Brady told me he had used at the bar at New Orleans, but she was lost in a hurricane.

Cross-int. 104 (de bene esse). When did he tell you he used her?

Ans. I don't recollect—I don't know as he told me—he told me of several persons in New Orleans who had assisted him in the enterprise.

Cross-int. 105 (de bene esse). You understand it was after you left New Orleans that he used her?

Ans. Yes, sir; certainly. She was running as a passenger and freight boat when I was there, between New Orleans and Mobile.

Cross-int. 106 (de bene esse). What did Brady tell you about his fitting up of her? State all he told you about her.

(Objected to as irrelevant.)

Ans. I don't know as I can state all he told me. He gave me an outline of the whole fitting and the incidents connected with his experience at the bar.

Cross-int. 107 (de bene esse). State as fully as you can what he told you about the fitting of the boat, her plan, &c.

(Same objection.)

Ans. He had fitted two agitators on her bow, each worked separately, each capable of being raised and operated distinctly from the other—distinctly and independently from the other—and had proceeded to the bar and had excavated the bar channel as per contract; but the hurricane in which she was lost filled the bar channel that he had previously excavated; that he had lost a great deal of money in that operation.

Cross-int. 108 (de bene esse). He gave you to understand that the Wiggins had been fitted upon his plans and under his superintendence, and operated by him, and successfully, had he?

Ans. Yes, sir.

133 Cross-int. 109 (de bene esse). What was the shape of the blade of the two agitators in the left-hand corner of the drawing you have spoken of, or of either of them?

Ans. One was a two-bladed propeller; the other a three-bladed propeller.

Cross-int. 110 (de bene esse.) Well, can't you tell the shape of the blades?

Ans. The two-bladed propeller was, as I have always understood, an English patent propeller for speed, the blades broader and blunter; the other was a three-bladed propeller of the usual form, with broader blades and blunter than used for propelling power.

Cross-int. 111 (de bene esse). Did you ever see either of these drawings more than once?

Ans. I saw them at his rooms at Carondalet street.

Cross-int. 112 (de bene esse). Both?

Ans. Yes; this amended one, as I call it, several times.

Cross-int. 113 (de bene esse). Did Bradley ever call your attention to it on more than one visit?

Ans. Every time I called upon him the matter was discussed and the drawing was produced.

Cross-int. 114 (de bene esse). Any changes made in it from time to time?

Ans. Not to my knowledge or recollection.

Cross-int. 115 (de bene esse). You were only in New Orleans temporarily, and had no interest in the deepening the mouth of the Mississippi, except such as a stranger, casually there, might have, had you?

Ans. I was temporarily in New Orleans, and had an interest in the deepening of the mouth of the river, not beyond any one having an interest in shipping felt; I don't mean pecuniary interest.

Cross-int. 116 (de bene esse). After leaving New Orleans, when were these drawings and conversations next brought to your recollection, and by whom?

Ans. On the 11th June, 1869, I met Capt. Brady on the South ferry-boat, having never seen or heard from Capt. Brady from the time I left New Orleans till that date. On the 15th June, same year, I called upon Capt. Brady at his office, 62 Montgomery street, Jersey
134 City; there was shown a drawing which, to the best of my recollection, was the identical one I saw in Carondalet street.

Cross-int. 117 (de bene esse). How did you happen to go to Brady's office—at his request?

Ans. At his request or invitation in reference to an inquiry I made of him as to what brought him to New York.

Cross-int. 118 (de bene esse). And you there talked over your conversations and the plans he showed you in New Orleans; was that it?

Ans. We had no reference to the conversations; showed me the plan by which he had fitted up the boat Wiggin's Ferry, also plan that I thought and now think was the same I saw in Carondalet street, New Orleans; and still another plan of a dredge-boat, and a plan of water-works, and fire-extinguisher, door-fastener, and showed me specimens of an oil he had patented, and of a patent method of clarifying oils.

Cross-int. 119 (de bene esse). Should you know these plans if they were again shown to you?

Ans. I think I should.

Cross-int. 120. What is your present occupation?

Ans. Iron forgings.

Cross-int. 121. Where?

Ans. Works at Paterson, New Jersey; office, 63 Liberty street, New York.

Cross-int. 122. Have you any interest in this suit, directly or indirectly?

WITNESS. Do you mean pecuniarily?

COUNSEL. Yes.

Ans. No, sir.

Cross-int. 123. Does Brady owe you money?

Ans. No, sir.

Cross-int. 124. In what you said as to these plans of dredge-boats, do you speak from any knowledge as a mechanic, or machinist, or from any practical or theoretical familiarity with machinery?

Ans. I have always been theoretically acquainted with machinery, and practically used to tools.

135 Direct examination resumed:

Int. 125. What kind of iron forging are you engaged in?

Ans. Everything in the shape of iron-work used in steamships, steam-engines, railways, and manufacturer of patent anchors.

Int. 126 (dē bene esse). Did not Brady tell you that the dredge-boat Wiggins, you have testified about, was constructed on what was called the "Bishop's plan"?

(Objected to for form and substance.)

Ans. Not to my recollection, as *the plan that I saw impressed me with the idea that it was the original agitator, although the agitator was worked in a different manner from the plan of which I saw at New Orleans.*

(**Objected to as irrelevant.)

Int. 127. Please examine the drawings herewith exhibited, marked Exhibit A, and state if you recollect of having seen it at any time? and if so, when and where?

(Counsel for respondent objects to the exhibition to the witness of any paper at this stage of the examination.)

Ans. I saw this exhibit, or this plan, for the first time at 62 Montgomery street, Jersey City, June 15, 1869.

Int. 128. Please state whether said exhibit represents the principles that Brady told you about in New Orleans that you have testified to of his plan for a dredge-boat, with the exception of the water compartments.

(Objected to as not competent on re-examination, as leading, as asking for the opinion of the witness, not fact, assuming what has not been proved, and in every respect irregular and inadmissible.)

Ans. The exhibit shows only two points of the original drawing seen in New Orleans, which points are the propelling power, the agitator in front being one of the new style agitators contained in the drawing seen in Carondalet street.

(Objected to as not responsive, and as incompetent evidence, because it introduces a comparison between two papers, one attempted to be introduced into the case, and one not offered.)

Int. 129. State the points of similarity of said Exhibit A with said drawings shown by Brady to you at New Orleans.

136 (Objected to as above, and also as asking for a comparison between paper offered in evidence by the complainant, and two papers proved to be in his possession and not offered in evidence.)

Ans. The propelling power; the agitator in front being one of the forms shown me in Carondalet street, New Orleans.

Cross-examination resumed:

Cross-int. 130 (de bene esse). In the drawings shown you in Carondalet street was there any difference in the shape of the agitator of which you have just spoken and the screw by which the steamer was propelled?

Ans. The agitator looks like one of the forms on the margin of the drawing—the two-bladed one; the propelling power, I should judge, was a three-bladed one, as that is the kind usually used.

Cross-int. 131 (de bene esse). In the drawing shown you in Carondalet street, was there any difference between the shape of the blades of this two-bladed agitator and the shape of the blades of the propeller by which the vessel was moved?

Ans. The agitator blades were broader and blunter and set at less pitch than the propeller, *and differed from the propelling blade in having two instead of three blades.*

(**Objected to as irrelevant.)

Cross-int. 132 (de bene esse). Did these differences in the shape and pitch of the blades appear in the drawing?

Ans. It depends upon who was looking at them; to a person unacquainted with such machinery there might appear no difference; but claiming some knowledge of the operations and effect of the different pitches, I deemed the drawing as showing.

Cross-int. 133 (de bene esse). To a person perfectly familiar with the construction and appearance of ships' propellers, would the blades of this two-bladed agitator, on his looking at the drawing, appear on inspection and without explanation to be only two, and to be of a different shape, and being at a different pitch from the blades of the ship's screw in the same drawing?

Ans. Unless a person was acquainted with the object of this agitator and the intention of the designer, its operation, the apparent
137 difference in the two screws might not appear; but as both the agitators and the propeller are made fast to a horizontal shaft, the pitch of the propeller does not appear, as the pitch of the fans is determined in the casting.

Cross-int. 134 (de bene esse). Did the drawing shown you at Carondalet street, without any explanation or statement of the purpose for which the agitator was wanted, indicate of itself any difference either in the shape or pitch of the blades of the agitator from those of the propeller; that is, would this difference which you say you knew existed have been apparent to you on looking at the drawing if you had not known the use for which the agitator was intended?

Ans. Yes, sir.

Cross-int. 135 (de bene esse). What was this difference? Describe the difference in shape of the blades of the agitator and in their pitch from those of the propeller in this Carondalet street drawing, as it appeared in the drawing—not as you knew it existed, but as the drawing showed it.

Ans. It is impossible to divest my mind of a knowledge of the existence, necessarily, after having previously been informed of the object of the machine.

(Objected to as evasive.)

Question repeated.

Ans. The difference in the blades of the agitator and the propeller existed in the fact that the blades of the agitator were broader and blunter, and set at a different pitch than those of the propeller.

Cross-int. 137 (de bene esse). Did the drawing shown you in Carondalet street show the blades of the agitator to be broader than those of the propeller?

Ans. To the best of my knowledge and belief, it did.

Cross-int. 138 (de bene esse). Were the blades of the agitator blunter than those of the propeller in the same drawing?

Ans. To my eye they appeared to be.

Cross-int. 139 (de bene esse). Were they shorter or longer in the drawing than those of the propeller?

Ans. I should judge they were shorter.

Cross-int. 140 (de bene esse). The drawing you said showed that one agitator had two and one three blades; did it show more than two blades in the propeller?

138 Ans. I think the propeller had three.

Cross-int. 141 (de bene esse). In Exhibit A do you see the blades of the agitator to be broader than those of the propeller?

Ans. I do not in the drawing?

Cross-int. 142 (de bene esse). Do you see them to be blunter than those of the propeller?

Ans. They do not seem to be in the drawing.

Cross-int. 143 (de bene esse). Does the drawing show any difference in the number of the blades in the agitator and the propeller?

Ans. It does not.

Cross-int. 144 (de bene esse). Does it show any difference in the pitch of the fans in the agitator and the propeller?

Ans. Apparently it does not.

Cross-int. 145 (de bene esse). Does the drawing show any difference at all between the agitator and propeller, so far as you can see?

Ans. The agitator looks, on the drawing, as if the shaft was pitched down; whether it is intentional or not, I am unable to tell.

Cross-int. 146 (de bene esse). Do you see any other difference?

Ans. No, sir.

Direct examination resumed:

Int. 147. Might not that which appears to be a bar between the two blades of the agitator that appear in Exhibit A, represent a third blade of the agitator, and the angle of the agitator also, when taken with the other two blades?

(Objected to in form as leading, also as not competent on redirect examination and for substance.)

Ans. It might.

ISRAEL W. LAMSON.

139 *Deposition of Charles J. Frautzen.*

Direct examination by counsel for complainant:

Int. 1. Please state your name, age, and residence.

Ans. Charles J. Frautzen; age, 33; 17 Beach street, city of New York.

Int. 2. Do you know Edwin L. Brady, the plaintiff in this action?

Ans. I do.

Int. 3. When and where did you first become acquainted with him?

Ans. At New Orleans, about the first part of February, 1866?

Int. 4. What was your business at New Orleans at that time?

Ans. I was bookkeeper and cashier in the employ of the Atlantic & Mississippi Steamship Company.

Int. 5. How long did you continue in New Orleans in that business?

Ans. Till the latter part of August, 1866.

Int. 6. How frequently, from the time you first saw said Brady, in February, 1866, till your departure from New Orleans, did you see him?

Ans. Most every day.

Int. 7. Please state whether you heard him speak about taking steam propellers over the bar at the mouth of the Mississippi, that had got grounded there.

(Objected to for form, also as immaterial and irrelative.)

Ans. In the latter part of the month of February the steamer Missouri arrived, and got fast on the bar, and I heard Capt. Brady advise Capt. Allen, agent of the company, to send word to the captain to back over the bar, by which means he would loosen the mud and work his way through.

Int. 8. Please state any other instances when you heard Brady speak of taking propellers over the bar by backing them.

(Objected to for form and as leading, and as assuming a fact not proved, and also as immaterial and irrelevant.)

Ans. A short time after the Missouri had worked its way over the bar by coming in stern first, the steamer Concordia got fast
140 on the bar, and I heard Capt. Brady talking about going down and fetching her in as the steamship Missouri worked her way.

Int. 9. Please state whether at New Orleans you heard said Brady at any time describe any plan or plans for dredge-boats for excavating river bars; if so, state when and where, and state as fully as you can what said plan or plans were that said Brady so described.

(Objected to for form.)

Ans. I did on a great many occasions; was at the office of the Atlantic & Mississippi Steamship Company and at the rooms of Capt. Brady; heard him converse about the plan he had of excavating the bar, and saw drawings representing the principle and the mode by which he proposed to operate the same. This was during the months of March and April, 1866. *The plans I saw represented a boat, and Capt. Brady explained the working of the same—a screw at the bow of the vessel which could be raised and sunk at will by means of water tanks.*

(** Objected to as not responsive and as stating contents of a written paper not produced and in possession of claimant.)

Int. 10. Please state any description, if any, given by said Brady to you or in your hearing, of any plan for a dredge-boat excavator; state what Brady said without reference to plans.

(Objected to for form and substance as leading, and as asking for a description of the contents of a paper in the possession of the complainant and not produced, and calling for incompetent testimony.)

Ans. Brady stated that a boat built with a propeller in front, which could be raised and lowered at will by means of water-tanks as ballast, would answer the purpose of widening the mouth of the Mississippi River—deepening the mouth of the river I mean.

Int. 11. When and where and how often did you hear Brady describe said plans?

(Objected to as before.)

Ans. At the office of the Atlantic & Mississippi Steamship Co., and at his rooms on a number of occasions, more especially every time a vessel got fast on the bar, it would be the subject of conversation.

During the months of February to the month of August; all during that time, in the year 1866.

141 Int. 12. State whether you saw in Brady's possession any dredge-boat plans; if so, state when and where, and describe the same as fully as you can.

(Objected to as before.)

Ans. I saw plans. I saw several. I saw one at his room which looked to me like a boat with a propeller at the stern and another at the bow. The propeller at the stern was to be raised and lowered by means of water-tanks; that is as near as I can describe it; in the month of—in the latter part of February and first of March, and at sundry other times during my stay at New Orleans.

Int. 13. Please state whether said plan provided for lowering and sinking the whole vessel at pleasure; and, if so, in what manner?

(Objected to for form, as leading, suggestive, assuming fact not proved, and for substance, and as asking for a description of a paper in the hands of complainant and not produced.)

Ans. The water-tanks, being in the hull of the ship, must consequently lower or raise the whole vessel.

(Complainant's counsel object as irresponsive.)

Int. 14. Question repeated. Counsel for complainants then added: "Question simply this: Please state whether said plan provided for lowering and sinking the whole vessel at pleasure; and, if so, in what measure."

Ans. Yes, sir. It was to be lowered and raised at will by means of water-tanks.

Cross-examination by counsel for defendant:

Cross-int. 15 (de bene esse). When were these conversations with Captain Brady, of which you have spoken, first recalled to your mind after your leaving New Orleans?

Ans. The conversations themselves were never recalled to my mind until yesterday, hearing the testimony in the case.

Cross-int. 16 (de bene esse). You say the conversations themselves were never recalled to your mind till yesterday. When were you first spoken to about testifying in this case, and by whom?

Ans. Some six or eight months ago I met Captain Brady in Jersey City, and he asked me whether I recollected anything with reference to bringing the steamer Missouri over the bar, and he requested

142 me to call over to New York and state what I knew of the matter. I promised to do so, but failed to attend.

Cross-int. 17 (de bene esse). Did you tell Captain Brady at that time, in Jersey City, what you did remember about the Missouri?

Ans. I told him I recollected the circumstance distinctly.

Cross-int. 18 (de bene esse). Circumstance of what?

Ans. The circumstance of the steamship Missouri working a passage over the bar by means of her screw.

Cross-int. 19 (de bene esse). Is that all you told him?

Ans. I may have mentioned other circumstances that may have transpired about that time; but don't recollect exactly what.

Cross-int. 20 (de bene esse). Do you remember anything else you told him?

Ans. I do not.

Cross-int. 21 (de bene esse). Do you remember his asking you anything at that time except if you recollected the Missouri working her way over the bar by her screw?

Ans. I do not.

Cross-int. 22 (de bene esse). Was this a casual interview with Capt. Brady, or did he come to see you for the purpose of making this inquiry?

Ans. It was a casual interview—a casual meeting, rather. The first time I had seen Capt. Brady since I had left New Orleans.

Cross-int. 23 (de bene esse). These conversations which you have spoken of—were they with you or with other persons in your presence?

Ans. Sometimes with me; sometimes with others in my presence.

Cross-int. 24 (de bene esse). What was Capt. Brady's business in New Orleans at this time?

Ans. As far as I know, he was interested in the shipping business.

Cross-int. 25 (de bene esse). In what way?

Ans. Buying and selling vessels; chartering vessels.

Cross-int. 26. Where was his office or place of business?

Ans. He made his headquarters at 100 Common street.

Cross-int. 27. Whose office was that?

Ans. Office of the Atlantic and Mississippi Steamship Company.

Cross-int. 28. Had he a desk there?

Ans. Well, none of his own.

143 Cross-int. 29 (de bene esse). You have described one drawing of his. Did you ever see more than one?

Ans. I saw several pencil sketches.

Cross-int. 30 (de bene esse). Have you ever seen any of these drawings since then?

Ans. There was one handled about at this office yesterday. I did not look at it particularly. Unless that was one, I have not seen any.

Cross-int. 31 (de bene esse). Do you know of Capt. Brady's making any experiments to test the plans shown you?

(Objected to by complainant's counsel as irrelevant and incompetent.)

Ans. I do not.

Cross-int. 32 (de bene esse). Did he exhibit and explain his plan to you when he talked about it?

Ans. He did.

Cross-int. 33 (de bene esse). Where was this?

Ans. At his rooms—Carondalet street and Bourbon street; at both places.

Cross-int. 34 (de bene esse). Did he exhibit and explain pencil sketches to you?

Ans. He did.

Cross-int. 35 (de bene esse). Where and when?

Ans. Sometimes at the office, and sometimes at his rooms; between the months of February and August, 1866.

Cross int. 36. You had no interest specially, I take it, in deepening the mouth of the Mississippi?

Ans. Not more than being an employee of a steamship company.

Cross-int. 37. Were you in their employ before you went to New Orleans, or since you came back?

Ans. I was not in their employ before I went to New Orleans, nor have I been since I returned.

Cross-int. 38 (de bene esse). Do you know of Brady's opposing or being at work on any other plan for deepening the mouth of the river than that you have described in your direct examination?

Ans. I do not.

Cross-int. 39 (de bene esse). And do you know of his communicating this plan to any person or company engaged officially, or inter-

144 ested pecuniarily, in deepening the mouth of the river with a view to have it tried?

Ans. I do not.

Cross-int. 40 (de bene esse). The conversations with you were, I take it, casual conversations. Brady didn't want you to do anything about the matter one way or another, did he?

Ans. He did not to my knowledge.

Cross-int. 41. Well, what do you say about the conversations? He had no purpose in them?

Ans. No; none whatever, that I should think.

Cross-int. 42. What were your duties in the steamship company's office?

Ans. Bookkeeper and cashier.

Cross-int. 43. You made Brady's acquaintance in New Orleans, and had it while you were there; but were there any special intimate relations between you, or was it a mere ordinary acquaintanceship?

Ans. A mere ordinary acquaintanceship.

Cross-int. 44. Did you know, or did you hear anything about any other plans for deepening the mouth of the river?

(Objected to as irrelevant.)

Ans. I did not.

Cross-int. 45. Didn't you ever hear of Bishop's plan?

Ans. No, sir.

Cross-int. 46. Don't you know of the plan and machine for dredging the mouth of the river employed by Capt. Brady in the very next winter and spring after you were in New Orleans?

(Objected to as irrelevant, incompetent, and assuming a fact that is not proved.)

Ans. I do not.

Cross-int. 47. Didn't he ever tell you about it?

(Objected to as above.)

Ans. I believe he mentioned that he had been interested in clearing out or deepening the bar at the mouth of the Mississippi, but how I don't know.

Cross-int. 48. Didn't you ask him, or didn't he tell you, whether the plan which he had employed was the same as that he had shown you at New Orleans?

(Objected to as above.)

145 Ans. He did not; I did not ask him. * I asked him if he had made anything by it, and I understood that he had lost by the operation.*

(** Objected to as not responsive.)

Cross-int. 49 (de bene esse). From the time you left New Orleans till yesterday, if I understand you, you never made any inquiry as to the plans you have testified about, as shown you there by Brady, and have never heard anything about them from him or any one else?

Ans. No.

Direct examination resumed:

Int. 50 (de bene esse). You say, in answer to defendant's counsel, that you believe Brady mentioned that he had been interested in clearing out or deepening the bar at the mouth of the Mississippi. Please state what was said by you and Brady about that subject at that time.

(Objected to.)

Ans. I don't recollect any more, but that he just mentioned that he had been interested in such an enterprise. I don't recollect the conversation any more than it was just mentioned.

Int. 51 (de bene esse). Did you ask him any question about it, and, if so, what?

(Objected to for form, as leading, and as not competent on redirect examination, and as immaterial.)

Ans. I believe I asked him whether it had proved profitable; and the answer—that he had lost money by the operation.

C. J. FRAUTZEN.

Deposition of William H. Allen.

Direct examination by counsel for complainant:

Int. 1. What is your name, age, and residence?

Ans. William H. Allen; age, 55; Staten Island.

Int. 2. What is your present occupation?

Ans. Farming.

Int. 3. How long have you been engaged in your present occupation?

Ans. About three years.

146 Int. 4. What was your occupation previously?

Ans. Agent for the Atlantic & Mississippi Steamship Line at New Orleans; previous to that I attended to the shipping of the coal for Vanderbilt's steamers, and employed by Com. Vanderbilt, attending to the out-door business of the California steamers, and as agent for special business at different times to Panama, Nicaragua, and New Orleans; been more or less connected with shipping business from boyhood at different times.

Int. 5. Do you know Edwin L. Brady, plaintiff in this action?

Ans. Yes.

Int. 6. When and where did you first become acquainted with him?

Ans. December, 1865. Capt. Brady was a passenger on board the Missouri with me, going to New Orleans to take charge of the Atlantic & Mississippi Steamship Line, as agent at that place. We sailed from New York about the middle of December.

Int. 7. Do you know Israel W. Lamson?*

Ans. I do.

Int. 8. Did you hear his testimony taken yesterday in this case?*

Ans. I did.

Int. 9. Did you introduce Brady to Lamson?*

Ans. I did.

Int. 10. When and where?*

Ans. In New Orleans, at my office, or at the office of the line, rather, soon after my arrival, the latter part of December, 1865.

(**** Questions objected to, as incompetent and immaterial.)

Int. 11. Did you hear the conversation between Lamson and Brady, referred to by Lamson in his deposition in this case?

(Objected to, for form and substance.)

Ans. I don't know that I heard the conversation referred to, particularly, but I have heard them talking over the subject of deepening the mouth of the Mississippi, in connection with the plan suggested by Captain Brady.

Int. 12. Please state when and where you heard such conversations, and state same fully as you can.

(Objected to, as before.)

Ans. These conversations took place directly, or commenced directly after my arrival in New Orleans, the latter part of December,

147 1865, at the office of the line, in Common street. Particulars I can't distinctly recollect, as my attention and time was occupied

by my business; but the subject of opening the Mississippi was talked over by them, and Captain Brady seemed to be explaining his views and plans to Mr. Lamson.

Int. 13. State the substance of what Brady said touching the subject of opening the mouth of the Mississippi.

Ans. The substance was, that a properly built boat, with a particular screw attached to the bows to agitate the mud, to be carried off by the current when so agitated, with propelling power at the stern, she could deepen the channel so as to relieve the navigation. The boat to be constructed with water-tight compartments, so as to take hold of the bottom of mud as required.

Int. 14. Please state whether said Brady talked to you on the subject of deepening the mouth of the Mississippi, or to any other persons in your hearing, on that subject.

Ans. Directly after my arrival he did.

Int. 15. You mean your arrival at New Orleans, as above stated?

Ans. Yes.

Int. 16. Please state the said conversations, or the substance thereof, as nearly as you can, and with whom had.

Ans. Upon our arrival at New Orleans, we found the bar of the Mississippi greatly obstructed by the deposit collected at its mouth during the war, and it was a source of great inconvenience and expense to navigation. Captain Brady took a deep interest in it, apparently. Immediately upon our arrival there, and within a few days, he showed me at the office a pencil sketch of a plan of boat which he felt confident would accomplish the object of deepening the bar at the mouth of the Mississippi.

(Answer so far objected to as relates to pencil sketch not produced.)

This plan or sketch he explained to me, and produced a favorable impression upon my mind of its feasibility; it showed at the bows of the boat a mud screw, or agitator, as he called it, by which he proposed to stir up the mud to be carried off by the current, and thus deepen the passage to enable vessels to pass; the stern had a propelling screw,*

148 and he explained to me that the boat was to have water-tight compartments to be used for ballast to keep the vessel or the boat close to the bottom to enable the agitator to take hold of the mud.

(*The whole answer to this objected to, as irresponsive, and stating the contents and description of a plan and writing in the possession of the complainant and not produced.)

Int. 17. State what further explanations Brady made, if any, at the conversation spoken of in your last answer, touching his alleged plan in addition to the water compartments of such boat.

(Objected to for form, as leading, and suggesting answer.)

Ans. He explained to me the working of this agitating screw, being slightly different from the ordinary propelling screw, to be worked by a steam power—separate steam power from the propelling power—and the object of the water-tight compartments was to control the vessel or keep her on the bottom so that she could be advantageously worked, as there might be objections by simply using the ordinary propelling wheel or screw.

(Answer objected to, because the plan is not produced.)

Int. 18. Please describe what you mean by the phrase "this agitating screw."

(Objected to.)

Ans. I mean by the agitating screw, the screw shown to me and ex-

plained by Captain Brady when he exhibited to me the sketch of the boat suitable to remove the obstructions at the mouth of the Mississippi.

(Answer objected to, because the plan is not produced.)

Int. 19. Did said Brady, at said conversation, explain to you the location of said agitating screw on the boat he proposed? And, if so, state its location.

(Objected to, for form, as leading, and, second, because the plan is not produced.)

Ans. He did explain the location as being at the bows of the boat—of the mud agitator—and the propeller at the stern.

Int. 20. State whether you heard any other conversations.

Ans. I did. The matter was town-talk—the matter of the deepening the bar—and was a subject of almost daily conversation with Capt. Brady, myself, and the different captains in the office from time to time. The expectation and hope among the commercial community in New Orleans at that time was that the government would do
149 something towards deepening the mouth of the river. Capt. Brady explained to me that his object in giving this subject his attention was to get a chance at any appropriation that might be made with a view to accomplishing the object, *and convinced me in his various explanations that he had a chance to accomplish a good result.*

(** Objected to as not responsive, as stating the opinion of the witness and not fact, and immaterial.)

Int. 21. State whether you heard Brady describe his said plan to others than yourself and said Lamson; if so, to whom, when, and where?

Ans. Well, I think I have heard him explaining it to all of our captains as they arrived there. Scarcely a day passed but what the subject was up as a matter of conversation at that time.

Int. 22. State whether Brady ever described to you, or in your hearing, any plan for taking propellers over the bar; and, if so, when, and on what occasions?

(Objected to as immaterial.)

Ans. Soon after my arrival in New Orleans—very soon—vessels being almost constantly delayed on the bar, he suggested to me the feasibility of bringing our screw steamers over the bar stern foremost, it *being, to a certain extent, the plan he had then in view for deepening the mouth of the river,* and the same suggestion was made to some of our captains after their arrival there, by Capt. Brady.

(** Objected to as not responsive, as stating an opinion of the witness, and not fact, and as incompetent testimony.)

Int. 23. You have spoken of a conversation you had with Brady directly after your arrival at New Orleans, about his alleged plan for dredge-boats. Please state whether he had conversed with you previously on that subject; and if so, when, and on what occasion?

Ans. I think the subject of deepening the mouth of the river came up upon our passing the bar on our passage out, there being many vessels then detained there for want of water to get over. Captain Brady then said that he had a plan in his head to accomplish the object. Nothing particularly was explained in reference to it.

Int. 24. State what explanation, if any, was given of it.

Ans. I don't recollect any particular explanation at that time.

150 Cross-examination by counsel for defendant:

Cross-int. 25. You say Brady spoke of his scheme to the captains of your various ships that were in there. Didn't he also speak of them to other persons besides yourself, Mr. Lamson, and these officers?

Ans. I think it more than likely he did, as he seemed to be very much interested in it; but I can't call to mind any person in particular; it was a subject very generally conversed upon by the commercial community of New Orleans at that time.

Cross-int. 26. And so far as you know, Brady made so secret of his scheme, did he?

Ans. Round in the office there, I should think not.

Cross-int. 27. You had no acquaintance with him before you went down there with him on board ship?

Ans. I first met him on board the ship as a passenger.

Cross-int. 28. Had the people in your office, or the captains, any acquaintance with him except what they made there?

Ans. I should think some of them had known him previously, from the manner in which they met.

Cross-int. 29. And some not?

Ans. And some not.

Cross-int. 30. Do you remember what vessels you had in, and who the captains were?

Ans. The steamships Missouri and Matanzas were running in the line. Captain Sherman commanded the Missouri at first, Captain Slocombe faterwards commanded ner. Captain Leesgoing commanded the Matanzas.

Cross-int. 31. What was Brady's business in New Orleans?

Ans. He seemed to be engaged in steamship bsuiness soon after he got there, trying to organize a line to Florida, and one to Brazil. * I believe was owner or part owner in two or three boats soon after he got there.

(** Objected to by defendant's counsel as not responsive.)

Cross-int. 32 (de bene esse). How many times did you see this pencil sketch at the office of which you spoke?

151 Ans. The—I don't think I saw the pencil sketch at the office more than once. The first time he brought it there he showed it to me, and I only looked at it that once. I am not positive.

Cross-int. 33. Did he take it away or leave it there?

Ans. He took it.

Cross-int. 34. To whom else did he show it?

Ans. I don't know particularly of his showing it to any one else. He may have had it when he was conversing with other parties there, and showed it to them; but I don't know.

Cross-int. 35 (de bene esse). Describe it so far as you can; its shape, what it was drawn on.

Ans. It was drawn, I think, on a piece of writing paper, in pencil; form of a low steamboat, having apparently propellers at each end, with crosses up and down in the middle of the boat *to designate the water-tight compartments as explained by him; the forward screw said to be a little different from the stern, of which I could not see much difference; said to be worked with two engines; separate engines; two or three, perhaps;* a square sheet of paper. I can't get much nearer than that.

(** Objected to by defendant's counsel as not responsive.)

Cross-int. 36 (de bene esse). Have you seen this drawing since?

Ans. No.

Cross-int. 37. Do you know of Brady's going to any government officer or person or company engaged officially, or interested pecuniarily, in deepening the mouth of the river, and laying his plan before them, with a view to its being tested or adopted?

Ans. I don't know of his having made any proposition to any one for the use of his machine; but he told me that he was looking out for an appropriation from the government for deepening the mouth of the Mississippi, when he calculated being for a chance at the job.

Cross-int. 38. Told you that with reference to this plan you have described?

Ans. Yes; to this plan.

Cross-int. 39. Do you know anything of Brady's employment in deepening the mouth of the river the next winter or spring?

(Objected to as irrelevant and incompetent, and as calling for secondary and assuming a fact not proved.)

152 Ans. Only what he has told me.

Cross-int. 40. What has he told you?

(Objected to, as before.)

Ans. On meeting Capt. Brady last month, being the first time I had seen him since I left New Orleans, I naturally inquired what he had been about. Among other things, he stated that he had been associated with two or three of my acquaintances at New Orleans on the bar—deepening the bar; that an appropriation had been made, a large appropriation had been made, and they went in to get it. They—some of them—suggested that they should fit up a boat with a plan of Bishop—a man by the name of Bishop—as an experiment, it being—they being able to get it up at moderate expense—the expense of his machine being so great that they could not handle it. The plan of Bishop's Brady looked upon, as he told me, unfavorably; that they could not control it, probably, which proved to be the case on working. The boat met with disasters after being engaged for some time, and as they could get no payment for the work, it was abandoned.

Cross-int. 41. Is your previous answer what Brady told you?

(Objected to, as before.)

Ans. It is.

Cross-int. 42. Did he tell you who was engaged with him in this enterprise? You said some acquaintances of yours. Who were they?

(Objected to, as before.)

Ans. The name—Mr. Creevy, large shipping house in New Orleans; Mr. Tyler, steamboatman; Mr. Bishop, or the owners of the plan of Mr. Bishop, I don't know which.

Cross-int. 43. What was the reason that he gave you why they did not try his plan?

Ans. The expense. The reason of their not trying his plan was, as stated to me, the expense and time of building the boat.

Cross-int. 44. What did he tell you they had ascertained that would be?

Ans. I think he said $200,000 or $300,000. I think he named that amount. I am not positive.

Cross int. 45. Did he tell you of whom they had inquired?

Ans. No.

153 Cross-int. 46. You understood him then, simply, that his plan which you had seen had been discussed by them, and abandoned because they found it would be two expensive?

(Objected to as irrelevant, incompetent, and as hearsay.)

Ans. I did not understand from my conversation, or his conversation with me, that he had discussed it with them; he spoke in his own person to me, and said that he did not at the time like Bishop's plan, and if he could have commanded the money, he would have built the boat

on a plan to have accomplished the object similar to the plan suggested to me when we arrived at New Orleans.

Cross-int. 47. You understood, then, that Brady having in his possession a plan which he believed would successfully deepen the mouth of the Mississippi, had, without disclosing it to his associates, embarked his money in another plan for effecting the same object, which he did not like, and which he did not believe in?

(Objected to as incompetent, irrelevant, and assuming fact' not proved.)

Ans. I did not so understand it.

Cross-int. 48. What did you understand then? Had he disclosed his plan to his associates, did he tell you?

(Objected to, as incompetent and immaterial.)

Ans. I can't say that he did express himself in so many words; *but the impression made upon my mind was, that his associates knew of this plan, and that the company, or the associates, were desirous of getting into this job at a small expense to secure the appropriation for the work.*

(** Plaintiff's counsel objects, as irresponsive.)

Cross-int. 49. By the words "this plan" in your last answer, you mean, I suppose, Capt. Brady's plan, of which you have spoken, which he showed you in New Orleans?

Ans. That is the Brady plan; yes.

WM. H. ALLEN.

154 *Deposition of Edwin L. Brady.*

Direct examination by counsel for complainant:

Int. 1. What is your name, age, occupation, and present residence?

Ans. Edwin L. Brady; age 36; consulting engineer of steam, hydraulics, and inventor; have an office 107 York street, Jersey City, and branch office 62 Montgomery street, Jersey City. I am director and manager of the Stamford Water Company, and projector of the work.

Int. 2. Are you complainant in an action of Edwin L. Brady in equity against the Atlantic Works, pending in the U. S. circuit court, Boston, Mass.?

Ans. I am.

Int. 3. Are you the patentee named in certain letters patent of the United States, issued to Edwin L. Brady, for an improved dredge-boat for excavating rivers, bearing date December 17, 1867, and herewith exhibited to you, and marked Exhibit B, C. W. N., commissioner?

Ans. I am.

Int. 4. Are you the said Edwin L. Brady named in a caveat filed in the Patent Office of the United States the 17th day of May, 1867, for dredging and deepening the channel at the mouths of rivers and harbors, a certified copy whereof, and drawings annexed and supplementary sketch, are herewith exhibited to you and marked Exhibit C, C. W. N., commissioner?

(Objected to, for form.)

Ans. I am.

Int. 5. Please state when your attention was first directed to the subject of dredge-boats, and state your knowledge of dredge-boats, and your experience touching them?

(Objected to, for form and substance, and immaterial.)

Ans. When I was about twenty years old, I was detailed by Chief-Engineer John Farron, to whom I was an assistant at the navy-yard, Brook-

lyn, N. Y., as engineer of the large dredging machine belonging to the United States Navy, then operating near th enavy-yard, opposite the new dry-dock then in course of construction at that place; was for several
155 months attached to the Farron dredge, which at that time was the largest in the country; immediately after which I was detailed to similar duty on board the Osgood patent dredge, operating at same place; was there for some months, after which was returned to my original position in the navy-yard. In 1853, early in March, I was ordered by civil engineer, General Ward B. Butnett, to a like position on an Osgood patent dredge, then being operated by the United States Navy near Ellis's Island, depository for United States magazines; was there, I think, about two months. General Ward B. Burnett was chief instructing engineer in charge of the navy-yard, Brooklyn. I have always taken an interest in them; have seen all the devices in use; I think I have seen most of them; I think I know eight kinds, eight varieties of dredging machines, and understand their operation, theory, and practice; also had an interest in the dredging operation at New Orleans, and managed the same a portion of the time.

Int. 6. When did you conceive the principle, or essential features, or peculiarities of the dredge-boat described in your letters patent?

(Objected to, for form.)

Ans. Early in January, 1866.

Int. 7. State as fully and clearly as you can, just what you did, and when, from the time when you first conceived the principles of said dredge-boat, until you filed your application for said patent, for the purpose of developing and perfecting the same.

Ans. My counsel informed me he was going to put such a question to me, and I have written down the subject-matter and occurrences in rotation, as they occurred, which I can annex, or read it, as you think fit, in answer to that question. I herewith read my said written statement and hand it to the commissioner as my answer hereto, and marked Exhibit G[1], C. R. N. commissioner.

Int. 8. Have you known M. D. McAllister? if so, how long, and when did your acquaintance with him commence? and state his business when you first met him.

(Objected to, as immaterial.)

Ans. I did know him. I met him first in November, 1867, at his office, on Camp street, New Orleans. Was introduced to him by a party named Bishop. I don't know his first name. McAllister was brevet lieutenant-colonel in the U. S. A. Engineer in charge of the
156 improvements of the mouth of the Mississippi River. * I went to see him in reference to advertisement in the paper, in which he requested proposals for deepening the mouth of the Mississippi River.*

(** Objected to, as not responsive, and as stating contents of a written paper, and the whole answer as immaterial and incompetent.)

Int. 9. State whether you communicated to said McAllister anything in relation to your said invention before obtaining said patents, and if so, state when, and where, and what.

(Objected to, as immaterial, incompetent, hearsay.)

Ans. I did at several places, or at three different places; the first at his office at Camp street, New Orleans; the third time I ever saw him, it was in November, 1866, I think a few days after I saw his advertisement for deepening the river mouth; the second during an intermission of the performance of an opera at the St. Charles Theatre, New Orleans, in November, 1866; the third happened on the Wiggins, at the time she was preparing to go to the bar, in my private room; I

think I spoke of it again to him when I showed him the first completed drawing, the ink drawing, at his private office, Camp street, New Orleans; this occurred early in May, 1867, the second week in May; the May following the November. (The outlines of a boat, dredge-boat, with a mud-fan or propeller attached to the bows, operated by an engine, and the boat furnished with water compartments, by filling which with water the draught of the boat could be graduated, and the boat raised or lowered at pleasure by filling or emptying the water compartments, with the object that the mud-fan or propeller might be brought to operate against the mud on the bottom directly or by means of the back water thrown off from the mud-fan or propeller. These plans contained more or less variations, or varied in slight particulars, but all embodied the plan which I afterwards patented as a combination of a propeller, agitator, and water tank, as applied to a dredge-boat. My plans, as explained to him, also, had separate engines and propellers aft for propelling the boat.) *In all these interviews I distinctly disclaimed to him, as I have also on my patents, all plans for dredge-boats predicated on weighing down one end of a boat. (My plans being the only ones I had ever seen or heard of by which a dredge-boat could be raised or lowered if desired on an even keel, with all its agitating machinery.)*

(** Objected to, by Mr. Abbott as irresponsive.)

157 *†Some of the drawings or sketches which I showed him, or gave him, were extended views of the dredge-boat; others were sectional or cut in two lengthways of the vessel; those sectional drawings showed the water compartments, or tanks, and the engines as applied to the mud-fan or agitator, and other engines applied to the propelling screw. There were many varieties of screws or agitators shown on these plans. The last plan I showed him was almost an exact counterpart—it was an act counterpart—of the one attached to the caveat, and he read me a letter in which he had described it to General Humphreys some time before, and asked me if I thought his description embodied it; don't know if he sent the letter describing it, or if it was an original or a copy, as he placed it in his draw'. Now there were other plans which he showed me, but I don't know if it has anything to do with my business or not.*

(**Objected to by Mr. Abbott, as irresponsive.

(††Objected by Mr. Lothrop, as describing plans not introduced, and stating the contents of written instruments.)

Int. 10. State whether you ever said anything to said McAllister in relation to your said invention before obtaining your patent; if yea, state when, where, and what.

(Objected to as immaterial and incompetent.)

Ans. I did speak to said McAllister. I have prepared a written answer to this question, which I submit as my answer, marked G^2.

Int. 11. State whether said McAllister in any manner aided you touching said invention?

(Objected to for form and substance.)

Ans. No; I guess a soldier could not help much.

Int. 12. Between the time you conceived the idea of your said plan and your application for said patent, what drawings, sketching, or tracings, designed to represent said plan, did you make; if you made any state when and where made, and produce all of same now in your possession or control, and state when and where the same were made; *state what you did with the remainder of said drawings, sketchings, and tracings, and where same now are?

(*From here, question objected to for form, and assuming fact not proved.)

Ans. I have prepared a written answer to this question which I submit as my answer, marked G³, C. W. N., commissioner.

158 (So much of the foregoing answer as refers to drawings not exhibited, objected to; as it refers to and states the description of drawings not produced, for substance.)

Int. 13. Did you ever see the steam dredge-boat Enoch Train?

Ans. No, sir.

Int. 14. Whether you ever knew, saw, or heard of any light-draught monitors, so called, or any other boats excepting the said boat built by the defendant company and complained of in the bill in this case, containing the principles of your said patent dredge-boat?

(Objected to for form, as assuming fact not proved; second, for substance, as incompetent and immaterial.)

Ans. I never did.

Int. 15. When did you prepare your said caveat, and when your application for said letters patent?

(Objected to.)

Ans. I mailed the caveat early in May, 1867. I don't understand the question. I would like to ask whether by preparation you mean the time I sent it, or the time I was engaged in making it?

Mr. ABBOTT. I mean when did you write the caveat or cause it to be written?

Ans. The caveat in latter part of April or May, 1867; and the application for letter' patent in the latter part of August, 1867.

Int. 16. State whether you gave the defendant company, at any time, the right to use your said invention.

(Objected to as immaterial and incompetent.)

Ans. I did not.

Int. 17. Since obtaining said letter' patent for said invention, have you continued to be, and are you now sole owner?

(Objected to as incompetent, calling for secondary evidence.)

Ans. I have continued to be and am sole owner thereof.

Cross-examination by counsel for defendant:

Cross-int. 18. During what year were you assistant engineer to Chief Engineer John Farron?

Ans. In the years 1848–'49, and at different intervals after that time.

Cross-int. 19. During the period did you hold any official position in the Navy?

159 Ans. In the employ of the Navy, but not on the register. I was a civilian * and so was Chief Engineer Farron.* I was in the employ of the Navy, on the books of the Navy at the navy-yard, Brooklyn.

(** Not responsive.)

Cross-int. 20. Did you ever hold any commission or warrant in the Navy?

Ans. I never held a commission but have had several acting appointments. *On one occasion as acting chief engineer U. S. steamer Vixen, Commander John DeCamp. Also served in the same capacity on same vessel, while she was on special coast survey duty, John K. Duer, commander. Also on same vessel on coast survey duty four additional years under command of Commodore Thos. S. Phelps, U. S. Navy; was transferred with Commodore Phelps and crew, at commencement of war, to U. S. steamer Corwin; served as chief engineer of her while

she was attached, second division, Admiral Goldsborough, squadron North Atlantic; also while she was at West Point and at Hatteras Inlet. The 19th of May, 1863, I received an appointment from Gideon Welles, Secretary of the Navy, to report to Admiral Bailey at Key West, for duty as engineer of U. S. steamer De Soto, West India squadron, which appointment I refused. The appointment is now in my possession; was about eight years in the hydrographic department of coast survey, which is officered and manned by the Navy, during all of which was chief engineer. That is all.*

(** Objected to, as not responsive and stating the contents of written instruments.)

Cross-int. 21 (de bene esse). Were not all these appointments in writing?

Ans. Yes, sir.

Cross-int. 22 (de bene esse). Your duties on board these various vessels of which you have spoken here, as chief engineer in charge of the machinery of the boat, were they not?

Ans. Partially, and such other duty as I was ordered to do in connection with surveying. In government service, my duties were confined to the engines.

Cross-int. 23. You have said that when you were employed with Mr. Farron, you were engaged upon a dredge-boat then used in dredging; what sort of a dredge-boat was this, and how operated?

160 Ans. The first one, or what I call the Farron dredge, was composed of two hulls connected by beams, and having a set of warp or long timbers lowering between the hulls, furnished with wheels, round which passed endless chains, to which were attached sheet-iron buckets, which, dragging on the bottom, filled with mud and in their turn were emptied into scows to be carried away; the boilers were in one hull, engines in the other. She was the largest machine of the kind I ever saw.

Cross-int. 24. Well, it was the Osgood patent dredge on which you were next employed?

Ans. It was the invention of a resident of Troy, named Osgood, fitted with a crane on the bow, to which was attached a beam of wood having a huge dipper on the end lowered by means of chains, and a trip-chain causing the nose of the dipper to enter the mud; an elevating chain to raise the dipper when full, after which the crane would be swung to nearly any point within a half circle and the mud be deposited in scows.

Cross-int. 25. In both these dredges, the mud or deposit was scooped from the bottom, raised in a dipper or bucket, deposited in scows to be carried off, wasn't it?

Ans. It was.

Cross-int. 26. This is an an old and familar process of dredging; isn't it the common process?

Ans. Yes.

Cross-int. 27. And on these boats you were engineer and had charge of the engines?

Ans. Yes, sir.

Cross-int. 28. After you left the Osgood dredge, where were you next employed on any dredge-boat?

Ans. On another Osgood dredge, or the same boat, I have forgotten which, under the directions of General Ward B. Burnett at Ellis's Island.

Cross-int. 29. And in the same capacity?

Ans. Same capacity, except that there were two engineers, for day and night.

Cross-int. 30. Were Mr. Farron and General Burnett, or either of them, United States officers, or were they persons employed or having contracts with the government?

(Objected to, for form.)

161 Ans. General W. B. Burnett was civil chief engineer in charge of improvements, navy-yard, Brooklyn and New York harbor. Chief Engineer Farron was chief engineer of steam department, navy-yard, Brooklyn; his official title was senior engineer of the station.

Cross int. 31. Was General Ward B. Burnett a general in United States Army or New York State militia?

Ans. He had been a general in the United States Army in the Mexican war, but had resigned, so I understood at the time I was under him; he held the appointment from the President; his name appeared in the United States Naval Register as civil engineer on duty at New York.

Cross-int. 32. After you left your occupation on board the second Osgood dredge, were you engaged on any dredge-boat until your connection with the Wiggins?

Ans. I think not.

Cross-int. 33. In the Wiggins Ferry, the apparatus employed for dredging was what was known as Bishop's cones or screws, or dredging apparatus?

Ans. The agitators only were Bishop's, and even then, not his entirely, being half the dimensions proposed by him; the frame work and elevating machinery adjuncts were adapted and arranged by a foreman from Armstrong's foundry, at New Orleans.

Cross-int. 34. Did Bishop's plan or apparatus cover anything but agitators?

Ans. Not so far as I know of, by an inspection of his drawings or a sketch on the printed hand-bill, and his model in the Patent Office which I have examined, to neither of which was attached even the model of a boat, or the drawing of a boat, or any plan, shown either in said model in the Patent Office, or *in his explanations to me of any feasible manner of attaching said cones to a boat, other than he said he could do it; and the way he proposed to do it was by having the point of the cone rest on the mud and the large end near the surface on an angle. Those on the Wiggins were not so employed.*

(** Objected to as not responsive and as hearsay.)

Cross-int. 35. Do you know when Bishop's apparatus was patented?

Ans. I do not; I did once, but have forgotten it.

Cross-int. 36. Was he in New Orleans when the Wiggins was fitted up as a dredge-boat?

162 Ans. Yes, sir.

Cross-int. 37. Had he any interest in her?

(Objected to, as immaterial.)

Ans. I agreed to give him one-quarter of the profits.

Cross-int. 38. Was that as a sort of compensation for the use you made of his cones?

(Same objection.)

Ans. No, not the cones proper; it was supposed to cover the entire arrangement; he said he had some plans, but he never showed any feasible connection of cones with the boat, by which they could be operated to advantage.

Cross-int. 39. In the Wiggins the agitators were raised from and lowered to the bottom by machinery entirely independent of that by which the boat was worked, were they not?

Ans. It was, but by the same engines that revolved the agitators.

Cross-int. 40. And how were the agitators worked on the bottom; what was their mode of operation?

Ans. By endless chains revolving over adjustable wheels that required to be readjusted each time the agitators were lowered or raised; the adjustment was effected by means of ropes, blocks, and chains.

Cross-int. 41. The idea of the agitators was to stir up the mud or deposit, that it might be carried off by the current?

Ans. It was.

Cross-int. 42. And they were brought to a proper depth by machinery, were they not?

Ans. They were lowered to a proper depth partially by machinery, and partly by relaxing or lowering on the adjusting falls of the fair leaders or pulleys used in the adjustment.

Cross-int. 43. What is your best recollection as to the time Bishop's plan was patented? Wasn't it as early as 1856?

(Objected to, as assuming a fact not proved, and calling for what is not the best evidence, and as hearsay).

Ans. I don't know. *About a year ago, on business at the Patent Office, ex-Commissioner Holloway hunted up the model; but I can't tell the date that was on it.*

(**Answer objected to by plaintiff's attorney as irresponsive.)

Cross-int. 44. As to the adjusting the agitators to the proper
163 depth, the general difference between the mode employed in the Wiggins and that proposed in the plans which you have testified about, and the plan you have produced is this, is it not: That in the mode employed in the Wiggins the agitator was raised and lowered while the boat's draft of water remained the same, while in the plans you have spoken of, and the patent produced, the relative position of the agitator and boat is not changed, but remains the same, and the boat itself is lowered to the required depth by means of compartments filled with water? I don't mean to inquire about the details of the process, but about the radical differences.

Ans. *The radical difference between my plan and patent and between Bishop's plan, or any other plan except mine, is that mine is a combination of a boat and agitator, and my patent is on such boat and agitator as an entirety, and not on either an agitator or a boat taken separately.*

(**Objected to as not responsive.)

Cross-int. 45. What are the peculiarities of this combination for which you claim the patent?

Ans. The peculiarities of this combination for which I claim and have been granted a patent are several, and are set forth in the claim attached to my patent and granted to me in said patent.

Cross-int. 46. You have said in your direct examination that in your conversation with Gen'l McAllister, you "distinctly disclaimed," as you have also in your patent, "all plans for dredge-boats predicated on weighing down one end of a boat." Please explain fully what you mean by this.

Ans. I think it is amply explained; the explanation is the statement made in my direct examination that I disclaimed all such boats. I had only seen one boat fitted that way, and she was an endless-chain boat, depositing mud in scows and unmanageable.

Cross-int. 47. Why, then, did you make this disclaimer?

Ans. Because I didn't claim anything on that plan, and did not consider such a plan feasible.

Cross-int. 48. You say you have never seen but one boat on this plan; had you never heard or known of other boats on this plan?

Ans. I had not.

164 Cross-int. 49. Had you ever heard this plan of "weighing down one end of a boat" suggested at any time by anybody, except in the instance you have spoken of in your endless-chain boat?

Ans. Nobody but myself. I have suggested the plan for bringing vessels over the bar that way, but not as a business.

Cross-int. 50 (de bene esse). You have testified as to three interviews with General McAllester when you talked with him about your invention; one at his office in Nov., 1866, one at the theatre during an intermission, and one in May, 1866; and you say in all these interviews, "I distinctly disclaimed to him, as I have also in my patent, all plans for dredge-boats predicated on weighting down one end of a boat." Why, if you had never seen such a boat except in the instance of the endless-chain boat of which you have spoken, and never heard of any such boat, and never suggested yourself, and heard from any one else a suggestion of any dredge-boat on this plan, as you have just now testified, did you at each of these interviews, occurring at these intervals of time, make this distinct disclaimer?

Ans. Because General McAllester had suggested that he could get a steamer, and by fixing a large propeller and tipping her at the stern and using her on the bar in the mode I had explained to him of getting vessels over the bar, that he could employ her at the bar as a permanent dredge-boat or for the purpose of dredging.

Cross-int. 51 (de bene esse). What was the advantage of a larger propeller, as stated by General McAllester?

Ans. He didn't state the advantages; he asked me what I thought of it, and I told him.

Cross-int. 52. You say in your patent claim, "I am aware that boats have been constructed with compartments to be filled with water to sink the dredging mechanism to the bottom, by the loading the end of the boat in which such mechanism is placed." To what boats did you refer when you wrote this?

Ans. The endless-chain boat—triangular box.

Cross-int. 53. To any others?

Ans. To all others which I had not seen which might be in existence and I not know it; the one specially alluded to was the triangular box before mentioned.

Cross-int. 54. If you knew only of this one boat, why did you say, "I am aware that boats," using the plural?

165 Ans. Because my counsel who acted in procuring the patent, indited the phraseology thereof.

Cross-int. 55. This dredge-boat to which you referred, then, in this clause of your claim, and in the disclaimer made to General McAllester, was the endless chain boat of which you have spoken?

Ans. It was, with the exception of the conversation relating to the weighting down any steamer before referred to.

Cross-int. 56. No boat was ever actually used by General McAllester on his plan, so far as you know?

Ans. Not that I know of.

Cross-int. 57. Do you know of any such boat ever being used by any one else?

Ans. I never saw any so used as a dredging machine.

Cross-int. 58. The endless-chain boat of which you have spoken was a bucket dredge, I suppose, wasn't it?

Ans. Yes, sir.

Cross-int. 59. Did you ever know or hear of any boats being constructed "with compartments to be filled with water to sink the dredging mechanism to the bottom by loading the end of the boat in which such mechanism is placed," in which the dredging mechanism was an agitator of any kind?

Ans. Never, until after I obtained my patent.

Cross-int. 60. The plan suggested by General McAllester in this conversation you have spoken of, of putting a larger propeller into a steamer and depressing the stern and using the propeller as an agitator, would have been a plan of this sort if it had even been carried out?

Ans. The plan referred in the question was alluded to as my plan of getting vessels over the bar, and not an original suggestion of his own.

(Objected to, as not responsive.)

Cross-int. 61. You have stated that in the interviews with Gen. McAllester you disclaimed "all plans for dredge-boats predicted on weighting down one end of a boat," and you have said that you did so "because Gen. McAllester had suggested that he could get a steamer, and by fixing a larger propeller, and tipping her at the stern, and using her on the bar in the mode I had explained to him of getting vessels over the bar, that he could employ her at the bar as a permanent dredge-
166 boat, or for the purposes of dredging." In making this disclaimer, then, you were disclaiming, were you, the use of the very mode which you had suggested yourself?

Ans. I was disclaiming it as a permanent dredge boat to be used regularly for the purpose, *as I regarded the weighting-down process as only a temporary arrangement when nothing better could be had, and thought the government ought to build a regular dredge-boat on my plan, and let adaptizing alone.*

(**Objected to as irresponsive and not competent by defendant's counsel.)

Cross-int. 62. Had you any other reason for these disclaimers than what you have already stated?

Ans. No; none other that I recollect of.

Cross-int. 63. What would be the difference between a boat constructed with compartments filled with water, to sink the mechanism to the bottom, by loading the end of the boat in which such mechanism is placed, that is, such a boat as you disclaimed in your patent, and the boat patented?

Ans. The difference would be, one end of the boat would draw a great deal more water than the other end would; and another reason would be, that such a boat, when once the deep end touched the mud, would be comparatively unmanageable, and could not be kept on a given course without difficulty, more especially were she running with the current,—against the current I should say,—*thus, were she entering the Mississippi bow first, with her stern weighted down, her bow would pass over mud that would catch and impede her progress when her stern reached the same spot; the consequence would be to stop her progress, and when once stopped, the bow being afloat, subject to the action of the current, she would turn around and face the sea, or her stern hang to the current.*

(**Objected to as irresponsive.)

Cross-int. 64. You say the difference between a boat constructed with compartments to be filled with water to sink the dredging mechanism to the bottom, by loading the end of the boat in which such mechanism is placed, and the boat patented, would be that one end of a boat so constructed would, when in use, draw a great deal more water than the other end would. How would this be in your patented boat?

167 Ans. On my patent the boat can be made to sink on an even keel; but it can also diverge from a true level, if required. No other boat—dredge-boat—can be made to sink on an even keel. And my boat can also be better controlled in her movements and operations from that cause than, I suppose, a boat constructed in any other way would be.

Cross-int. 65. Suppose your boat should be sunk, as you say it can be, with one end loaded, how would it differ in such use from the boat disclaimed in your patent?

(Objected to as immaterial.)

Ans. If the process of sinking at one end was carried to extremes she would be unmanageable, like the boat constructed to sink at one end, or partially so. Were she only tipped slightly, it would not make much material difference, as I understand it; but I have not yet seen it practically demonstrated on a dredge-boat in use at that work, and I only speak from what I suppose would be the case.

Cross-int. 66. Suppose your patented boat and the boat such as you disclaim were each sunk to an equal depth by loading one end; what would be the difference between them in any way?

(Objected to, as immaterial.)

Ans. One difference would be, one would be on my plan and the other wouldn't; neither would be of any practical utility in that condition for use—for constant use—for the duties of a dredge-boat. It might possibly assist nature a little, but not much.

Cross-int. 67. What is the merit of your boat over such a boat as you disclaim?

Ans. As set forth in the verbiage and subject-matter of my patent, the merit over such a boat is, that it is able to lower the boat on an even keel, if desired, by which the effective action of the mud-fans, propeller, and steering apparatus is preserved, and the boat manageable at any desired depth.

Cross-int. 68. Did you ever see a dredge-boat in operation adjusted to any depth by water-tight compartments?

Ans. I never did, in operation, either on my own plan or anybody else's.

Cross-int. 69. Did you ever make any experiments to ascertain whether a dredge-boat constructed so as to be raised and lowered by
168 water-tight compartments would or would not operate successfully with one end lowered?

Ans. I have, in a small way, before I obtained my patent, in the investigation of the subject, by observing deep-loaded ships and the effect produced upon them in cases where they drew more water at one end than in the other, and in cases where the deep end referred to has touched the bottom and the remaining end being some distance from the bottom, and afloat, and from my knowledge of mechanics, machinery, and ships in a tide-way, I have come to the conclusion that the boat would be partially unmanageable.

Cross int. 70. Was this conclusion which you had reached one reason why you had disclaimed them?

Ans. Partially.

Cross-int. 71. Won't you please state any single experiment that you ever made to ascertain whether or not a dredge-boat with an unadjustable agitator and water-tight compartments constructed so as to lower one end, would or would not be preferable to a boat sunk on an even keel?

(Objected to as immaterial.)

Ans. Inasmuch as there has never been but one boat built on this plan, and I have never seen her in operation, I can make no comparison; but I have made actual experiment with an actual dredge-boat to ascertain that fact; but a boat constructed on my plan can be tipped, if found desirable so to do.

Cross-int. 72. If to use a dredge-boat constructed on what you call your plan, she is to be tipped so that one end where the dredging mechanism may be, is lowered in the same manner and to the same extent as a boat constructed with compartments to be filled with water, to sink the dredging mechanism by loading that end of the boat in which the mechanism is, what is the advantage of your own boat over a boat so constructed?

(Objected to as immaterial.)

Ans. The advantage is that my boat could be lowered at either end, or on an even keel, if desired, while the other boat could only be lowered at one end and could not be lowered on an even keel.

Cross-int. 73. Your patent describes a boat with dredging mechan-
169 ism only at one end. What is the advantage of lowering it at the other end, as distinguished from lowering it over an even keel?

(Objected to as immaterial).

Ans. The only advantage is, to be able to do with the boat as circumstances require in cases of emergency; my boat I am speaking of now; to tip her at either end, or to lower her on an even keel, to better control her actions and movements when on an even keel, for if the boat could not be sunk on an even keel she could not be tipped at either end.

(Objected to by defendant's counsel, as not responsive, and evasive.)

Cross-int. 74. Don't you know that a dredge-boat, named the Enoch Train, using its screw as an agitator, and sunk by water-tight compartments, so as to bring the boat to the required depth, the agitator being unadjustable, was used for dredging purposes on the Mississippi River in or before the year 1861?

(Objected to as assuming a fact not proved, and for form.)

Ans. I have no knowledge of such a thing.

Cross-int. 75. Did you never hear of such a boat?

(Objected to for same reasons.)

Ans. I heard of a dredge-boat called the Enoch Train, in Boston, about a year ago, since the commencement of this action.

Cross-int. 76. State all you ever heard or know about such a boat.

(Objected to, as assuming a fact not proved.)

Ans. I did not hear of such a boat at all. I heard of a boat called the Enoch Train, once built for a tow-boat, I believe, in Boston, afterwards a Confederate ram, in which capacity she was when she was destroyed. My counsel told me that he heard she had been extemporized for some temporary duty in dredging; from the best information I could get on the subject, she had no propeller, or mud-fan, or agitator at her bow, and that after being used for a very short time in trying to benefit the bar, she had been again used as a tugboat, afterwards as a

Confederate ram; but all this is from hearsay, not from my knowledge.

Cross-int. 77. You say "from the best information I could get on the subject." From whom and where did you get this information? State fully all particulars.

(Objected to as irrelevant, and as calling for hearsay testimony, and immaterial.)

170 Ans. I got no official knowledge not yet. I gleaned it from many sources, piecemeal; from sea-going men, tugboatmen, people interested in boats, and parties who had been out in New Orleans before the war. Do not recollect of any of the parties' names; it was gathered during a period of the last seventeen months. Have not taken nay pains to recollect it, because all I heard of her was so at variance with my plan, and because I heard she had been abandoned as a dredge-boat, and afterwards used as a Confederate ram and tugboat. Never saw her myself.

Cross-int. 78. You stated all your sources of information, have you?

(Objected to as immaterial.)

Ans. I have, I think, stated all such sources that I have heard from up to this time.

Cross-int. 79. And when was your first information received?

(Objected to as immaterial.)

Ans. I think about the time of filing the answer in this complaint, although I am not positive; in the past seventeen months referred to, I only use the term seventeen months to designate that time when I saw the defendant's answer, and not as seventeen months actually elapsed. I have forgotten the time when the answer was filed, but commenced inquiry about the boat called the Enoch Train just after I saw the answer.

Cross-int. 80. Did you ever hear any description of the mode in which she was employed in dredging?

Ans. I did not from any parties who ever saw her operate a dredge themselves.

Cross-int. 81. Did you ever from any parties?

Ans. None who had ever seen it; only through second and third parties, except after the answer was filed in this action.

Cross-int. 82. When did you receive this information—second or third parties?

Ans. The first time in said answer to the complaint in this action, and at numerous times since, from my inquiries addressed to persons whom I supposed knew something of the tugboats.

Cross-int. 83. Please describe the process by which you have been informed that she was operated.

(Objected to as hearsay and immaterial.)

171 Ans. The process was so rambling, and the information collected item by item from people whom I had never met before, mainly, and the length of time that has elapsed since I commenced to investigate being so long, that I have no accurate recollection from which persons I obtained the separate items which went to make what small stock I have on the subject.

(Objected to by defendant's counsel as not responsive and evasive.)

Cross-int. 84. Please state the small stock of information you have on the subject.

(Objected to as immaterial and hearsay.)

Ans. First, that there was a tugboat built in Boston called the Enoch Train, built as such and used as such. Next, that she went to New Orleans as a tugboat. Next, that she had been at one time ex-

temporized for use temporarily at the bar at the mouth of the Mississippi River; that she had been afterwards abandoned so far as dredging operations were concerned, and had been again a tugboat; afterwards converted into a Confederate ram or gunboat, as which I heard she was destroyed. Heard she had a tank aft for tipping her stern; heard she had two propellers, but both of them on the end, namely, the stern, and that she never had any agitator on her bow.

Cross int. 85. When she was used in dredging, then, as you heard, she had a tank aft for tipping her stern, and her propellers were used to stir up the mud; is that it?

(Objected to as immaterial and hearsay.)

Ans. That was my impression, I believe.

Cross-int. 86. In what respect did she, when thus used, differ from your patented boat, so far as your patent goes?

(Objected to as immaterial.)

Ans. In every material respect, in not conforming to the claim granted me in my patent, in not being able to be lowered on an even keel, and tipping at only one end, and having no agitating screw on the bow, and for being objectionable in not being able to preserve the water level over the flues of the boat, there being great preponderance of water in one end of the boiler, while there would not be sufficient water to cover the flues at the other end of the boiler, and from the boat's being excessively tipped at one end, bringing an undue strain on the thrust bearing of the propelling-shaft, due in part to the ex-
172 cessive angle at which the periphery of the propeller-blade was brought against the mud, causing a violent inward thrust when backing and a corresponding outward thrust when going ahead when the propeller was in contact with the bottom, and in not being under control of her rudder when her stern was fast in the mud, and in not having any water compartments forward of her center to be filled, should she become fast in the mud aft, and it should be desired to release her from her position.

Cross-int. 87. You never, while you were in New Orleans, at the time you have spoken of, heard there of her use, did you?

Ans. I don't think I did.

Cross-int. 88. Don't you know?

Ans. I am almost positive I did not. I would not recollect it unless it was connected with some interests of mine.

Cross-int. 89. Did nobody with whom you were talking in New Orleans about dredge-boats made so as to be raised or lowered by means of water-tight compartments, and operated with an agitator, such as you have described on your direct examination, and while you were making the various drawings you have testified about, inform you, give you any information about the Enoch Train—give you any information as to the mode she was operated as a dredge-boat?

(Objected to as assuming fact not proved.)

Ans. When I commenced making the drawings aforesaid, I had few or no acquaintances in New Orleans; and till I had completed the first one, never spoke to anybody about it, nor heard any suggestions relating to the principle, nor to the tugboat Enoch Train, and don't recollect hearing of such a steamboat or tugboat while in New Orleans. Saw the name, I think, for the first time, on an oil painting of a clipper ship, office of Creevy, Nickerson & Co., New Orleans, after I had conceived my idea. I think in last part of January, 1866; have no other recollection of any Enoch Train at New Orleans.

Cross-int. 90. Did you ever hear who operated the Enoch Train as a

dredge-boat on the Mississippi, or who owned her while on the Mississippi?

(Objected to as immaterial and hearsay.)

Ans. I don't think I ever did.

Cross-int. 91. Do you know one John Roy, in New Orleans?

(Objected to as immaterial.)

173 Ans. I have seen him.

Cross-int. 92. Do you know one Thomas G. Mackie, now, or formerly of New Orleans, or of Algiers, in parish of Orleans, Louisiana?

(Same objection.)

Ans. I know a man of that name *who was dismissed for malpractice at a dry dock at Algiers, and incapacity, and afterwards connected with a small dry dock at Algiers, and for having caused an immense loss to the stockholders by false representations.* This is the only person of that name I know at New Orleans, or Algiers, Louisiana.

(** Objected to as not responsive, irrelevant, and impertinent.)

Cross-int. 93. Did you ever have any conversation with Mackie or Roy, or either of them, as to the Enoch Train and her use as a dredge-boat?

(Objected to as immaterial.)

Ans. I don't think it possible to ever had such conversation with either of them; *at all events, I never knew Mackie until after the operations with the Wiggins Ferry. Late in the spring or summer of 1866 I first made his acquaintance. I don't think he or I ever referred to the subject; we met but twice, I think. Only knew as agent for General McAllester about that time. Roy, I only knew as being connected as a foreman, being connected with erecting machinery on the Wiggins Ferry; only knew him recently as being recently retained in the employ of General McAllester for the engineer department of the Army, as a stone mason. I think, at all events, that was his trade, so he told me.* Don't think I ever conversed with either of them on the subject.

(** Objected to as not responsive, irrelevant, and impertinent.)

Cross-int. 94. Didn't you go to Mackie or Roy, in New Orleans, at the time spoken of, and make inquiries as to the Enoch Train, and mode in which she was fitted and operated as a dredge-boat?

(Objected to as immaterial, and the tenor not sufficiently indicated by the question.)

Ans. No, sir; I never did—at no time.

Cross-int. 95. While the Wiggins was fitting, didn't you tell John Roy, in New Orleans, in substance, that if Armstrong made any more fuss or trouble you would buy an old propeller boat, and fit her for dredging, as the Enoch Train was fitted, or something substantially to this effect?

174 (Objected to as immaterial, incompetent, as assuming a fact not proved.)

Ans. I would like to answer the question; it has to be answered in two parts. I did not then.

Cross-int. 96. Did you never tell him anything of this sort?

Ans. I never told him anything in which the words Enoch Train were used.

Cross-int. 97. Have you stated in this examination all your means of knowledge as to the Enoch Train?

(Objected to as immaterial.)

Ans. I think I have, up to the present time.

Cross-int. 98 (de bene esse). You say in your direct examination that you know, or knew, eight varieties of dredges. What are these eight?

(Objected to as immaterial.)

Ans. First, the Farron dredge, or one built by government at New York navy-yard. Second, the Osgood dredge. Third, Clam shells, or such as are in use at Jersey City now. Fourth, the Stevens dredge, commonly called big wheel dredge, used at Hartsimus Cove, Jersey. Fifth, the triangular box with endless chains—don't know the name, have forgotten. Sixth, the dry land dredge, or commonly called steam paddy. Seventh, Brady's dredge, or bar excavator, and eighth, a part of a dredge called Bishop's screw, for applying to a dredge, called Bishop's patent.

Cross-int. 99. The first six named in your last answer are bucket or scoop dredges, are they not?

(Objected to as immaterial.)

Ans. I believe they are.

Cross-int. 100. With Bishop's conical screws and the other dredge made by him, the mud is agitated and carried off by the current, as distinguished from the plan of raising it in buckets?

(Objected to as immaterial.)

Ans. *I never saw Bishop's screws, as he proposed to work them; therefore cannot describe the modus operandi, except from my own knowledge of a pair of mud cones something like his, that were used on the Wiggins, but not applied as Bishop proposed to apply his.*
175 I supposed he contemplated agitation—think he said so; by my plan I proposed agitation.

(Objected to as not responsive, and evasive, by defendant's counsel.)

Cross-int. 101. Bishop had an interest in the Wiggins' Ferry, hadn't he?

(Objected to as immaterial, and having been once answered.)

Ans. He owned nothing of the Wiggins' Ferry; he was to have one-quarter of the profits of the Wiggins' Ferry, if we had any. The agreement was made with an understanding that he had a way of applying his cones to a boat.

Cross int. 102. When was the drawing in your memorandum book made?

Ans. Made in the winter of 1866—early part of 1866; think in last part of January; not later than first February.

Cross-int. 103. Where was it made?

Ans. At the office of the Atlantic and Mississippi Steamship Co., 104 Common street, New Orleans.

Cross-int. 104. For what purpose was it made?

Ans. For the purpose of showing Mr. Clue and other people there my idea.

Cross-int. 105. Under what circumstances was it made?

Ans. The circumstances were that I had made a similar one in the same book at my room, in Bourbon street, and that in looking for it, to show it, did not find it in the book, as I had probably given it to somebody, and had to make another. The person for whose especial use it was made was John Clue, who was a capitalist going to Washington, and would talk to the authorities about such a boat being built. Mr. Allen was in the office.

Cross-int. 106. Then, if I understand you, the drawing was made in the course of a conversation with Clue at this office, to show him what kind of a dredge-boat you proposed, that he might present the plan to the authorities at Washington; and this was in January, 1866?

Ans. That was not the idea.

Cross-int. 107. Then what was the idea?

Ans. The idea was to get certain Congressmen to get an appropriation; to use their influence for the same.

176 Cross-int. 108. Was the time January, 1866?

Ans. I think it was late in that month.

Cross-int. 109. Was the drawing made then to show Clue?

Ans. It was made to give him a crude idea, explaining as I made; afterwards gave him a better made one on a sheet of foolscap paper.

Cross-int. 110. When was this?

Ans. About three days subsequent; three days afterwards; that same time that I gave him other drawings relating to salt-crushing machines.

Cross-int. 111. Where is Mr. Clue?

Ans. Dead.

Cross-int. 112. Was this pencil-drawing in the memorandum book ever shown to any one else?

Ans. I think Mr. Allen saw it at same time, same place.

Cross-int. 113. Any one else?

Ans. Perhaps others, as several were by; I don't recollect their names, as the office was full of people half the time.

Cross-int. 114. Can you name any living man except Mr. Allen to whom you ever showed this drawing?

Ans. I cannot now bring the name of any such to my recollection.

Cross-int. 115. Where has this drawing been since it was made?

Ans. I think about the time I came North, of that year, I cut it out of the cover, threw it in the bottom of my trunk with a piece of paper tied round it. Found it about a year ago, since the first time when I cut it out.

Cross-int. 116. Can you show me any other memorandum or drawing that was in this book at the time this drawing was made?

Ans. The drawing on the page facing it, or sketch, was made two or three days before.

Cross-int. 117. By whom?

Ans. By me. Another drawing, on the second leaf from that, was made about—perhaps one week before that.

Cross-int. 118. Who made the other drawing?

Ans. I made it.

Cross-int. 119. What are the two drawings of which you have spoken?

177 Ans. One is a manner—the last one spoken of—of raising a vessel by means of scows, hydraulic pumps, and Spanish windlass, and was made for Israel W. Lamson. The first one spoken of is another device for like purpose, with the substitution of derricks in lieu of Spanish windlass.

Cross-int. 120. When did you make your last mark in that book?

Ans. I think about the time I left New Orleans, June, 1866, for the North.

Cross-int. 121. What is that entry?

Ans. I am wrong there. I had the book in my trunk, and when I returned to New Orleans the book went with me; had it in my trunk on the Wiggins; the last part of the book is all entries made in 1866. I believe some of them 1865. I can't tell what is the last made.

Cross-int. 122. Show me, if you can, any other pencil drawing or entry made in this memorandum book in January, 1866.

Ans. Letters of introduction?

Mr. LOTHROP. Pencil, I said; not ink.

WITNESS. Petty cash, marked Ex. K.

Cross-int. 123. Has the drawing marked D been in any way touched by you since January, 1866?

Ans. I don't know that it has.

Cross-int. 124. Do you know that it has not?

Ans. I have not altered. It may have been touched—not touched with the pencil.

Cross-int. 125. Did you ever show this drawing to Mr. Lamson?

Ans. I don't recollect showing it to him unless he saw it in this office during the progress of this examination. I don't know, even then, if he has seen it. He may have seen it in New Orleans; my recollection is not clear as to this particular drawing. I think I made him one three days before this was made, or the second or third time I met him.

Cross-int. 126. Can't you recall any other person, living or dead, besides Mr. Clue, who is dead, and Captain Allen, who has testified nothing about it, to whom you showed this drawing?

Ans. I cannot, for the reason that I only knew about five persons by name in New Orleans; three of them were present at the time it was made, two engaged on other duties.

Cross-int. 127. Who were present who engaged in other duties, and what other people made up the five?

178 Ans. Mr. Allen and Frautzer—John Clue were present. Mr. Frautzer and Allen were engaged in the business of the office, but were in the same room and same end of the room, while I was sitting at my desk, or a desk. The five, Mr. Lamson, who was absent on his business; a young man named Joseph Walker, whom I took to New Orleans, and paid his passage for him; Clue, Allen, and Frautzer, made the five. These were the only five, but I had letters of introduction to the people of prominence.

Cross-int. 128. Where is Walker?

Ans. I have no knowledge about his whereabouts at present; last heard from him in New York.

Cross-int. 129. Did he ever see this or any drawings relating to your dredge-boat?

Ans. Don't think he did, as he took no interest in such things and was a bar-keeper by profession, whose passage I paid to New Orleans. (Plaintiff's counsel objects, as not responsive.)

Cross-int. 130. When, and where, and under what circumstances did you make the sketch on the back of the bill marked Exhibit H?

Ans. I made it in New Orleans, I think, in the office of the Atlantic and Mississippi Steamship Company, about first week in April, I should think, 1866. The circumstances were, that I was scribbling on the back of an advertising bill, which I had received a few days before, while waiting in the office for some person about a transaction in land; one, I think, said the day before he was a captain, and I thought if he called I might show it; but he did not come with his friend. The bill referred to, on which the drawing is made, is a bill of Mobile Daily Times.

Cross-int. 131. Did you ever show this drawing to any human being until you exhibited it here?

Ans. I think I did to many, or in mixed company, same day it was made.

Cross-int. 132. Name any person to whom you showed this drawing.

Ans. I think Wm. H. Allen saw it as we were talking, while I scribbled it or sketched, about the bill, which was on the reverse side.

Cross-int. 133. Name any other person.

Ans. There were many people in front of the office, but, for reasons stated before, I did not know their names.

(Objected to as evasive.)

179 Cross-int. 134. Can you name any other person other than Wm. H. Allen to whom you ever showed this drawing?

Ans. I cannot now name any such person.

Cross-int. 135. Did you ever use this drawing to illustrate and explain your plan to any person, so far as you can recollect?

Ans. I may have explained that part of it relating to the frustrum, or cone-shaped agitator, the propeller agitator, and the three propellers on one shaft agitator to Mr. Allen. I think it probable I did at the time, but am not positive; recollect no other.

Cross-int. 136. What is the full name of I. W. Black, to whom you say you gave the drawing which you showed to Lamson?

Ans. I don't know; don't think I ever heard. Capt. Black, I heard him called; don't know whether he was one.

Cross-int. 137. Where did he live?

Ans. I don't know.

Cross-int. 138. What was his occupation?

Ans. Connected with ships or shipping, forgotten which. Think he was a foreigner.

Cross-int. 139. Had he any office or place of business, and where?

Ans. I judge not by his conversation.

Cross-int. 140. How long have you known him?

Ans. I am uncertain as to length of time. I think in 1857 or '58, in Mobile, I met him first; saw him again at Savannah, I think, later. Met him once in South street, I think, in New York; saw him last summer at Norwalk, Conn., on the occasion of the fat man's clam bake; never saw him till I saw him at a hotel in Jersey City standing on the stoop.

Cross-int. 141. Was he at your office more than once?

Ans. No.

Cross-int. 142. Have you seen him since then?

Ans. I have not.

Cross-int. 143. Was the drawing you loaned him the pencil or ink drawing which you showed Mr. Lamson?

Ans. It was an ink drawing, I am positive; part ink and part pencil; colored in pencil.

Cross-int. 144. Mr. Lamson describes two drawings; was this the first or second drawing of which he speaks?

180 Ans. Don't recollect what Mr. Lamson said, speaking of the drawings.

Cross-int. 145. Which of the drawings that you showed Lamson did you give to Black?

Ans. The ink one, *which was a drawing very much like Exhibit I, with the exception that there was no yellow coloring to his; and it being a little larger, and the boat of a different shape, and the spaces between the different kinds of propeller not being filled with wood as in this drawing.*

(** Objected to as not responsive, and as stating the contents of a written paper; describing a drawing without being asked by defendant's counsel.)

Cross-int. 146. Where is the pencil sketch of which Mr. Lamson testifies?

Ans. I suppose torn up or given away, with many other such rough sketches; mislaid or lost somewhere.

Cross-int. 147. Can you name any other person to whom you showed, in New Orleans, any drawing of dredge-boat?

Ans. General McAllester.

Cross-int. 148. Any other person?

Ans. Mr. Lamson. Mr. Allen, Mr. Frantzer, Mr. John Clue, which was all I knew by name, I believe, at the time spoken of; showed it to strangers who came in company with any of my friends; don't recollect any of their names especially.

Cross-int. 149. From your arrival in New Orleans in December, 1865, up to June, 1867, didn't you by your letters of introduction, or other ways, make any acquaintances?

Ans. As to the letters of introduction, never used but three, and then never called on them after the first time; made many acquaintances the second season I was there.

Cross-int. 150. Who introduced you to Mr. Clue?

Ans. I think he called on me in answer to an advertisement of some 70,000 acres of land I wanted to sell and he wanted to purchase.

Cross-int. 151. How long after your arrival?

Ans. Very soon; I can't fix the date.

Cross-int. 152. Had you ever any business or other relation with him?

(Objected to as immaterial and incompetent.)

181 Ans. Yes, sir.

Cross-int. 153. What were they?

Ans. I had several business arrangements after that; one was he consulted with me and engaged me to make specifications relating to salt work, a salt island; another related to my land; and I had another connection with him relating to the Chilian Government, through the agents of that government, minister plen'*op*'enti*n*ary for that government at Washington, and the Peruvian minister, Signor Bareda.

Cross-int. 154. Can't you recall the name of any single captain or pilot to whom you explained your plan of dredge-boat or showed your drawings?

Ans. I think I showed to, perhaps, one or two of them, to a Captain Crossman, commanding a Boston steamer called the St. Louis; and perhaps many more whose names I do not recollect just now.

Cross-int. 155. When and where did you show it to Captain Crossman?

Ans. The first time when I first made his acquaintance, and he told me he was a captain of a Boston steamship; the place was at Masonic Hall, New Orleans.

Cross-int. 156. And the time when?

Ans. The winter of 1866, I think, in February; I am not certain. It was nearly spring, I think.

Cross-int. 157. Did you show him any drawings?

Ans. Showed him the sketch in the memorandum book, and I think a loose paper, on which a similar device, but am not positive which of the two, whether the memorandum or the paper I showed him. I was ashamed of the drawing.

Cross-int. 158. Where is Captain Crossman now?

Ans. Don't know his whereabouts; the last time I heard of him he was on Cape Cod, somewhere; have endeavored to see him two or three times while in Boston; never found him in town when I was there. He comes up there, so I was informed.

Cross-int. 159. Can you name any other captain or pilot to whom you showed any plans or drawings of dredge-boat, in New Orleans?

Ans. In the year 1866, do you mean, or do you mean at any time?

Mr. LOTHROP. There is no indication of time, it is of place.

Ans. I did. Captain Babson, steamship Palmyra. Captain
182 Winthrop Sears; Captain Hedge, steamship Kensington, all of Boston and New Orleans line. Captain Quick, steamer Mariposa, I think. N. Y. mailship, anyway. Captain Sumner, steamship Mississippi, N. Y. line, *to all of whom I showed a drawing, colored, of external view of my plan of dredge-boat, labelled Brady's dredge boat and bar excavator, which I placed on exhibition in the front office of N. Y. Mail Steamship Company, at New Orleans, and left there.*

(**Objected to as not responsive by defendant's counsel, and describing a drawing not produced and not inquired about.)

(Witness continued.) And other persons who visited that office, including General McAllester, whom I invited there specially to see it.

(Same objection.)

Cross-int. 160. When was this? State precisely as you can.

Ans. Early in May, perhaps about the fifteenth, 1867.

Cross-int. 161. Can you name any captain or pilot other than Captain Crossman, to whom you showed any drawing, or described any plans for dredge-boat in the year 1866?

Ans. Cannot now. Captain Lamson.

Cross-int. 162. Any other captain or pilot?

Ans. I cannot bring to mind any other.

Cross-int. 163. Except Crossman, Clue, Lamson, Allen, Futzer, and a General McAllester, can you name any person, captain, or pilot, to whom you stated your plans or showed drawings for dredge-boats in the year 1866?

Ans. I do not now recollect of any, but I may have.

Cross-int. 164. Can you name, except the persons above-mentioned, any person, captain or pilot, to whom you did this prior to March, 1867?

Ans. I cannot now recollect of any more persons.

Cross-int. 165. With what persons were you concerned in the enterprise of the Wiggins Ferry?

(Objected to as immaterial.)

Ans. With, first, Wm. Creevy; afterwards he associated with us John Armstrong and Horace Tyler. Bishop had a share in the profits, if we had any, but had no control of the management.

Cross-int. 166. Did you ever, prior to March, 1867, say anything to them, or either of them, as to your plan for dredge-boat?

(Objected to as immaterial.)

183 Ans. No, sir; *for reasons.*

(** Objected to by defendant's counsel.)

Cross-int. 167. Didn't you make while on the Wiggins Ferry, a drawing of dredge-boat, from which tracings were made by Lieutenant Paine?

(Objected to, as immaterial.)

Ans. I made a drawing on the Wiggins of a dredge-boat, and allowed Lieutenant Paine to make a tracing or copy.

Cross-int. 168. Where is that drawing; will you please produce it?

Ans. Yes, sir; it is Exhibit I, C. W. N., commissioner.

Cross-int. 169. Is that the only one?

Ans. That is the drawing, the original from which the tracings referred to were made.

Cross-int. 170. Did you not make on the Wiggins Ferry a pencil drawing of a dredge-boat, which you exhibited to Lieutenant Paine?

(Objected to as immaterial.)

Ans. I may have made pencil sketches, but not for exhibition to

Lieutenant Paine. *He may have seen some. But I had drawings in my trunk on board which Lieut. Paine never saw, unless he saw them at this office during this examination.*

(**Objected to by defendant's counsel as not responsive.)

Cross-int. 171. In an affidavit heretofore made in this case you have said that drawings made by you on the Wiggins and there seen by John Roy were not the ones which you afterwards patented, but only the crude idea of what you afterwards invented and procured a patent for; will you please produce the drawings referred to and described in this statement?

(Objected to as immaterial, incompetent; and said affidavit, or any purported extract therefrom, objected to, and as assuming facts not proved, and incompetent.)

Ans. I have no knowledge of any such affidavit referred to as being produced in this examination in this case, and do not understand the drawing referred to in the question.

Cross-int. 172. Please look at the paper shown you, marked Exhibit L., C. W. N., commissioner; is it not in your handwriting, and signed by you?

(Objected to as immaterial.)

184 Ans. Yes, sir.

Cross-int. 173. Please read from this paper the passage marked in brackets, letter M, slowly, that the commissioner may write it down.

(Plaintiff's counsel objects to the admissibility of said paper, or any portion thereof, directly or indirectly, as immaterial and incompetent, and generally.)

Ans. The written paper handed me by counsel for the defence, and the part marked in brackets, reads as follows: "And that at the time referred by said Roy in his affidavit as at which this deponent made some drawings on board the Wiggins, that said drawings made by me at that date were not the ones which I afterwards patented, but the crude idea of what I afterwards invented and procured patent; and this deponent made many drawings and designs before he settled and completed the plan and design for which he was granted letters patent, and that John Roy was not on speaking terms with this deponent at the time of my filing my caveat, but had been discharged from all employ or connection with the dredge-boat, or any of its owners."

Cross-int. 174. Have you the drawings referred to in this passage?

Ans. That passage refers to crude drawings containing some of the principles and arrangements of my patent; but the drawings attached to my patent were made previous to the so-called crude drawing or drawings, similar, which in themselves at the time I considered still cruder than what was called crude in the writing, and in getting my patent I returned to my first or crudest impression as to the general arrangement of the device.

(Objected to by defendant's counsel as not responsive, and evasive.)

Cross-int. 175. Didn't you draw on the Wiggins a pencil drawing about as large as Exhibit I and show it to Lieutenant Paine?

(Objected to as immaterial.)

Ans. I think it was Exhibit I that I showed him, but I recollect of no other.

Cross-int. 176. In the various drawings produced here you have shown various forms of agitators, have you not?

Ans. Yes, sir.

Cross-int. 177. And water compartments of various shapes, sizes, and positions?

185 Ans. Yes, sir.

Cross-int. 178. From the drawings filed by you in your application for patent, or from any other drawings in this case, and from the statement in your specifications, could any mechanic, in your judgment, construct a dredge-boat from the plan attempted to be indicated?

Ans. He could, if he was a good mechanic.

Cross-int. 179. During the war here, from 1861 to '65, were not light-draft monitors built with water compartments, so as to be raised or lowered on an even keel by letting in or out the water?

(Objected to as immaterial.)

Ans. None such were built or used as dredging machines, or for that purpose.

(Objected to as not responsive and evasive.)

Cross-int. 180. Have not floating docks long been built so as to be raised and lowered by means of water compartments?

(Objected to, as immaterial.)

Ans. Floating docks have been so made for use of docks only.

Cross-int. 181. In a dredge-boat built in accordance with the specifications and drawings of your patent, what is to prevent the forward screw working the head of the boat right off of the mire instead of holding on and grubbing in?

Ans. The rudder, by holding it in the opposite way so as to counteract; nothing else that I think of.

Cross-int. 182. Would that be sufficient?

Ans. It would, if managed properly, and not sinking the boat too deep at once.

Cross-int. 183. What kind of an engine is shown on your plan?

(Objected to, as immaterial.)

Ans. *On the plan the engine may be any desired kind;* this special one is a vertical engine, or trip-hammer, so called, commonly.

(**Objected to as evasive.)

Cross-int. 184. High pressure or low pressure?

Ans. On the plan, not shown.

Cross-int. 185. What kind of pumps does your plan show?

(Objected to as immaterial.)

Ans. Any kind, selected at the option of builder of the various kinds in use; no particular kind shown on the drawing.

186 Cross-int. 186. Would a vessel built with water compartments, as shown in the drawings attached to the patent, float if the tanks were filled as represented in the drawing?

Ans. It would depend entirely on how much water was contained in the compartments.

(Objected to as evasive.)

Cross-int. 187. Please produce copy of specification spoken of in your direct examination.

Ans. They are in the hands of my counsel at Boston, Mr. Allen.

Cross-int. 188. Where did you see General McAllester in New York, in the summer of 1867?

Ans. At an office on Bowling Green. The last building of the row next the Battery. I think the top floor.

Cross-int. 189. Whose office?

Ans. I don't know. I think he had taken a private office; don't know who hired the floor.

Cross-int. 190. How many times did you see him.

Ans. Once, as I passed through New York, only.

Cross-int. 191. When was it? State as nearly as you can.

Ans. Last days of August or first of September; think it was first week of September.

Cross-int. 192. Who was present?

Ans. No one was present while we were talking; but I brought a person with me to recommend to General McAllester, who remained in the outer office while we talked in the inner. Think a person came in whom McAllester introduced, and who went immediately out again. Think he called him Bowen, colonel or major, I forget which.

Cross-int. 193. You have stated in your direct examination that at this interview "Gen. McAllester said that he hoped I wouldn't agitate the subject of the patent fee until he had made a contract with some party to build, as the price would be increased thereby. He inquired if I actually had my patent in my possession, and I replied that I had not, but I was fully protected by my caveat." What reply did you make when Gen'l McAllester said he hoped you would not agitate the subject of a patent fee?

Ans. I made no reply directly to the point, but laughed at his remark only.

187 Cross-int. 194. What did you say or do about it, anything at that time?

Ans. I said the Engineer Corps ought to be congratulated on having one of its officers who was so jealous of the interests of the government in the matter of getting work done at the lowest cent of cost, or words to that effect.

Cross-int. 195. How soon after this were proposals advertised for?

Ans. I think he showed me that morning two newspapers, one a Philadelphia paper and one a New York paper; my impression was, they were that day's papers, but I have no recollection. The Philadelphia, the day before perhaps—

Cross-int. 196. How soon was the contract made and the work begun for the boat?

(Objected to as immaterial, and calling for contents of written instruments.)

Ans. I have no official knowledge of the date thereof, other than derived from letters of McAllester and Paine, and they do not state the exact date.

Cross-int. 197. Please produce those letters.

Ans. They do not state the date; Paine's letters *and* marked Exhibit N and N', C. W. N., commissioner.

Cross-int. 198. When did you first know or hear that the contract had been awarded and the work begun?

(Objected to as immaterial.)

Ans. I think I saw it in a newspaper; but I am not positive as to what source I derived my information. Think that Paine wrote me at the same time another letter. I can't state the exact date, some time in fall or winter; late in the fall.

Cross-int. 199. State as nearly as you can, how long after the 12th of October was it?

Ans. I think it was November, but am not positive; it might be the latter part of October I heard from Paine. I wrote to him to keep me informed on the subject.

Cross-int. 200. Do you know who made proposals for building this boat besides the Atlantic Works?

Ans. I do not; *other than I was asked if I would not make proposals myself, by General McAllester.*

188 (** Objected to by defendant's counsel as not responsive.)

Cross-int. 201. Did you know if the Atlantic Works had made proposals before the contract was awarded?

(Objected to as immaterial.)

Ans. I had not.

Cross-int. 202. Please look at the paper shown you, marked Exhibit O, C. W. N., commissioner. Is it not in your handwriting?

Ans. I think it is.

Cross-int. 203. Please look at the paper marked Exhibit P, C. W. N,. commissioner. Is not that in your handwriting?

Ans. I guess so.

Cross-int. 204. Please look at paper marked Q, and state if it is not your handwriting, and the letter referred to in your examination as that sent to General Humphrey.

Ans. I think it is the one I sent to General Humphrey.

Cross-int. 205. Is not R the tracing enclosed in that letter referred to?

Ans. It looks like one I sent, but I can't identify it.

Cross-int. 206. Please read from the affidavit heretofore shown you, passage marked in brackets S.

(Same objection as to previous passage.)

Ans. The passage referred to and handed me by counsel for defence, reads as follows: "Said Enoch Train had only one water-tank, and therefore could not be balanced or adjusted in any possible manner in the sinking or raising of the boat; and this deponent has seen an authorized drawing of said boat; and that said boat was only to be tipped or lowered at one end; and this deponent further states that in said deponent's patent, he disclaims all such dredge-boats as are made to sink at one end, and his patent claim sets forth so in plain terms, and this deponent does not claim any patent on such dredge boats as are made to sink at one end."

Cross-int. 207. Where did you see this authorized drawing?

(Objected to as immaterial.)

Ans. On a log of wood; *saw it being made for my benefit by a man whom I hunted up, and who asserted that he had been employed on a boat called the Enoch Train. I hunted him up at the request of my counsel after the commencement of this suit.*

189 (** Objected to by defendant's counsel as not responsive, and evasive.)

Cross-int. 208. (Repeated.)

Ans. On a dock near Gouverneur street, New York City.

Cross-int. 209. When was this?

Ans. Within a few days after my counsel informed me about such a boat. About the time this suit was commenced.

Cross-int. 210. Who was the man whom you hunted up?

Ans. I hunted among the tugboatmen of New York for any man who had been employed on such a boat. Finally, found a man who called himself Flynn, who gave me the information, and drew with a pencil on a mahogany log the drawing referred to from which I got my idea of such a boat, or of that boat.

Cross-int. 211. Had Flynn ever seen her in New Orleans, or only heard about her?

(Objected to as immaterial.)

Ans. I think he represented he had been a fireman on board, or an oiler.

Cross-int. 212. Where?

Ans. At New Orleans; said he had been in her also while a ram.

Cross-int. 213. The drawing so made you called an authorized drawing, did you?

Ans. I called it so at that time in my rough description without the advice or presence of any counsel, and as being authorized by a person who had seen her.

Cross-int. 214. Can you give any reason why you did not state anything about Flynn or this drawing when inquired of so particularly yesterday as to your sources of information with regard to the Enoch Train?

(Objected to as immaterial.)

Ans. I can. In stating yesterday, I understood the question to appertain to matters that occurred before the commencement of this action; and in stating as to any general inquiries I had made, I believe I said I had made many among seagoing men and those acquainted with tugboats. Flynn was one of those men from whom I gleaned the outlines of the boat, and his name only occurred to me last night after the adjournment of the examination.

Cross-int. 215. Did any other names occur to you after the ad-
190 journment of the examination of persons from whom you derived information as to the Enoch Train? Do any such now occur to you?

Ans. They do not.

Cross-int. 216. Why?

Ans. Because he was the only one I paid for that information, and because he afterwards annoyed me to get him a place.

Cross-int. 217 (de bene esse). Who was present at your interview with General McAllester at his office in November, 1866, when you communicated to him your invention, or testified on your direct examination?

Ans. No one was present when we talked but ourselves, General McAllester and me.

Cross-int. 218. Did anybody go with you to General Allester's office at this time?

Ans. No, sir.

Cross-int. 219. In whose presence at the interview at the St. Charles Theatre you have spoken of?

Ans. We stood in an aisle with our back to the wall.

Cross-int. 220. And who was present on the Wiggins at the conversation testified to on your direct examination?

Ans. No person; it occurred in my private room, as stated on direct examination.

Cross-int. 221. When did you hear of General McAllester's death?

(Objected to as a fact not proved.)

Ans. I have not been officially informed of his death, or told so by any person, except in the verbiage of a letter, which is as follows: April 29th, 1869, I think, is the date of the letter.

Cross-int. 222. Did you ever, prior to the time when you heard of General McAllester's death, make any claim to have invented the boat described in your caveat or patent before the departure of the Wiggins from New Orleans?

Ans. Yes, I did.

Cross-int. 223. Did you ever state to anybody before you heard of Gen'l McAllester's death that you had with him the conversation of Nov., 1866, and later in New Orleans, and the conversation in New York, in August, 1867, which you have testified to on direct examination?

(Objected to as immaterial.)

191 Ans. I did.

Cross-int. 224. To whom?

Ans. To my counsel.

Cross-int. 225. Who—what counsel?

Ans. Mr. Abbott, and I believe all the rest of my counsel in this case.

Cross-int. 226. Did you ever state to anybody the purport of these conversations to be as now testified to by you?

(Objected to as immaterial.)

Ans. I believe I did.

Cross-int. 227. Purport or substance?

Ans. I think I stated to my counsel about what I have testified to, or words to that effect.

Cross-int. 228. When?

(Objected to as immaterial.)

Ans. At various times—date not recollected—when we talked about the case.

Cross-int. 229. At any time before General McAllester's death; and, if so, to whom and when?

(Same objection.)

Ans. At various times, to my counsel only; perhaps in stating to my father, and explaining the case to my father, but can't recollect.

Cross-int. 230. Where is the first completed drawing which you showed to General McAllester in May, 1866?

WITNESS. Aren't you wrong about the date?

(Objected to as stating as a fact what has not been shown.)

Cross-int. 231. On your direct examination you say, "I showed him the first completed drawing at his private office, Camp street." Where is this drawing?

Ans. I think he retained it, or I gave it to him shortly after, I cannot say.

Cross-int. 232. After filing your caveat in May, 1867, what did you do towards perfecting your invention?

Ans. I was engaged in calculating and studying the effect that would be produced by the use of the combinations set forth in my caveat in bringing the same to the notice of the public by talking and arguing as to their merits,* and this calculating and estimating led to a

192 return to my first ideas of such a dredge-boat, with which view I filed my supplementary drawing, such supplementary drawings being a return to my first or crudest idea.*

(** Objected to as not responsive, irrelevant, and impertinent.)

Cross-int. 233. The drawings annexed to your caveat are marked 1 and 2; when were these filed?

Ans. No. 1 was filed with the original caveat, and No. 2 July 6th, 1867.

Cross-int. 234. How does it happen that you remember the names of so many captains to whom, after May, 1867, you described your invention, and cannot state the name of any person to whom you disclosed it in the year 1866, except Lamson, Frantzer, Allen, Clue, Crossman, and McAllester?

Ans. Because at that time my acquaintance was small in New Orleans, and those were the people that I saw most and was most intimate with.

Cross-int. 235. It has been already testified that in the winter and spring of 1866 you showed drawings and described your plan to various captains and pilots in the office of the Atlantic and Mississippi

Steamship Company; can you name any one captain or pilot to whom you showed these drawings, or any of them, or described this plan during this time?

Ans. I can. Capt. Lamson, Capt. Allen, Capt. Crossman or Crossin; I don't know how he spells his name. I don't recollect now the name of a single New Orleans pilot, except the captain of the pilots, whom I did not know until long after that. They may have come frequently into the office and seen them there.

Cross-int. 236. Can't you remember the name of any pilot whom you knew at that time?

(Objected to as immaterial.)

Ans. My only recollection of any pilot whom I knew at that time was from seeing them come in and out of the office to get their money from Capt. Allen. Can't recollect a single name now.

Cross-int. 237. You testified on direct examination that you had an interest in the dredging operations of the Wiggins, and managed it a portion of the time; what interest had you in these operations?

(Objected to as immaterial.)

193 Ans. I made the general plan to secure the contract with William Creevy; afterwards he concluded to use the name of Horace Tyler in bidding, and to give him a share of the profits. Afterwards we associated with us John Armstrong,* who had a foundry, and proposed and wanted to build the machinery necessary for the adaptation of the Wiggins. The contract was in the name of Horace Tyler. I believe I was his bondsman.

(* Objected to, as not responsive, and evasive, by defendant's counsel.)

Cross-int. 238. Had you any pecuniary interest in the Wiggins; and, if so, what?

(Objected to, as immaterial.)

Ans. I had; I was to have a portion of the profits.

Cross-int. 239. Put any money in her?

(* Objected to, as immaterial and incompetent.)

Ans. Not at the beginning.*

Cross-int. 240. At any time?

(Same objection.)

Ans. Afterwards did; by paying bills and debts.

Cross-int. 241. How much?

(Same objection.)

Ans. Don't know *the amount, as the accounts have not yet been balanced, and, as far as I know, the Wiggins is unsold.*

(** Objected to as not responsive.)

Cross-int. 242. How much did you put into her?

(Objected to, as before.)

Ans. Seven or eight months' time and services, and paid some bills for crew—amount not known. The account is at New Orleans.

Cross-int. 243. Was the amount put in $100, $1,000, or $5,000, or more?

(Same objection.)

Ans. I put in my services, or knowledge, against other people's money.

Cross-int. 244. Haven't you stated that you put into the Wiggins all the money you had?

(Objected to, as immaterial and incompetent, and general.)

Ans. Not in that phraseology; not on those terms, nor with that full meaning.

194 Cross-int. 245. Didn't you so tell Lieutenant Paine?

(Same objection.)

Ans. Not in them words.

Cross-int. 246. In what way?

Ans. The words were that my cash was about exhausted, and my hope was in getting money out of this contract.

Cross-int. 247. In your letter to the Atlantic Works, December 20, you say Lieut. Paine was with me when I drew the first line of the drawing?

(Objected to, as calling for the contents of a paper not in the case, and as immaterial.)

(Letter handed to witness). What do you mean by this?

Ans. In the letter referred to, which was written for a certain purpose, I may have so stated; the drawing referred to related to Exhibit I, made on board the Wiggins.

Cross-int. 248. Did not Gen. McAllester, in February, 1867, describe to you at his office, at New Orleans, a plan for a dredge-boat substantially on the principles adopted in the boat constructed by the Atlantic Works, as his own plan, the result of his own observation, thought, and experiment?

Ans. He did not, as his plan.

Cross-int. 249. Did he not, in May, 1867, read to you a draft of a letter to Gen. Humphrey, describing this plan as his own plan?

Ans. He did not so describe it as his plan; he read a draft of a letter which purported to be in my interest, and that only.

Cross-int. 250. How many such drafts did he read you? More than one?

Ans. Only one; *and he said he would change it—change the phraseology.*

(** Objected to, as irresponsive, by defendant's counsel.)

Cross-int. 251. Did not General McAllester, in the winter and spring of 1867, describe to you, as his own, the plan of a dredge-boat subsequently built by the defendants? Did he not afterwards, in the spring of the same year, read a description of such a boat, and in the conversation and letter both assume the boat to be his own invention?

Ans. He did not.

Cross-int. 252. You never had any such conversation with him?

195 Ans. I did not.

Cross-int. 253. Did he ever state to you as his own, any plan for a dredge-boat?

Ans. He never did.

Cross-int. 254. In your letter to General Humphrey you sign yourself late senior chief engineer, U. S. Coast Survey; on what ground do you affix that designation to your signature?

(Objected to as immaterial.)

Ans. On the ground of having been the senior or oldest chief engineer in the Coast Survey department; having been the oldest in that service at the time I resigned.

Cross-int. 255. Did your name ever appear on any government register, or any government book, as serving in that capacity?

(Objected to as immaterial.)

Ans. The Coast Survey issue no register or book, so far as I know.

Cross-int. 256. Is your title as captain a brevet title, or acquired by actual service?

(Objected to as immaterial, and as assuming a fact not proved.)

Ans. During the time I served in the Coast Survey I was chief engineer. I wore the uniform authorized under my acting appointment

as an engineer of the Navy, as an assimulated rank designated by shoulder straps as a captain in the Army; people usually called me captain from that cause, I suppose, and not from my profession, although connected with ships.

Cross-int. 257. Did you ever receive from General McAllester as to the length or shape of the agitator of the dredge-boat?

Ans. I don't think I did receive any from him. He may have asked me concerning it.

Cross-int. 258. In a conversation on the Wiggins Ferry, in the latter part of March, 1867, did not General McAllester say that in his opinion the screw for agitating the mud would be equally effective if its length were four feet instead of twenty feet?

(Objected to as immaterial, and assuming a fact not proved.)

Ans. I do not recollect any such suggestion.

Cross-int. 259. Didn't he at that time, on board the Wiggins Ferry, suggest and recommend a short screw, such as is shown in
196 drawing No. 2 attached to your caveat, instead of long conical screws like those employed on the Wiggins?

Ans. Not in my presence, nor to my knowledge. He made some inquiries, and suggested nothing.

Cross-int. 260. Didn't you, on or about the 12th of March, 1867, tell Mr. John Roy that the Enoch Train had been used as a dredge-boat upon the bar, and raised and lowered by means of water-tanks?

(Objected to as immaterial.)

Ans. It could not have been possible for me to have told Roy any such thing at that time, for several reasons.

Cross-int. 261. Didn't you say to General McAllester, before the Wiggins went down the river, that you were confident that with her you could clear the bar in ten hours, or substantially that?

(Objected to as immaterial.)

Ans. I did not in those words, nor in words of that meaning.

Cross-int. 262. What did you say on that point?

(Objected to as immaterial.)

Ans. I said I thought the Wiggins would worry a hole through the bar and get the $70,000; and if she done it at all, would know all about it in twelve hours after commencing work, and thought she would answer the purpose well enough for the short time specified in the contract, and in default of a better boat.

Cross-int. 263. When did the Wiggins leave for the mouth of the river, and how long were you engaged on her there?

Ans. I think about the latter part of February or beginning of March, and brought her up in the middle of May, 1867.

Direct examination resumed:

Int. 264 (de bene esse). Why did you not inform your associates in the Wiggins dredging operation of your said plan of a dredge-boat?

(Objected to.)

Ans. Because of the smallness of the appropriation would not build a boat on my plan, and because my associates would never have assisted me, nor furnish the money to enter on such an enterprise, and if I had broached the subject it would have shut me out from any participation in that contract for $70,000. The whole idea was to get something cheap.

197 Int. 265. State what became of the letter you have testified as having received from General McAllester.

(Objected to.)

Ans. Stolen with my travelling satchel on a visit to Boston.

Int. 266. State when received, and its contents.

(Objected to.)

Ans. Received in Connecticut about latter part of September, 1867; don't recollect exact phraseology. It inquired if I knew anybody who wanted to build such a boat; stated that there was some difficulty with reference to getting her built, or getting some one to build her; asked me what I was going to do or was doing, and if business called me to New York if I would stop in and see him.

Int. 267. Please read over carefully your answers in cross-examination, naming certain persons to whom you showed said drawing in your memorandum-book and refresh your recollection, and state, if you can then recall any other person or persons, to whom you showed said drawing; and if so, who?

(Objected to for form, as not competent on re-examination, not relating to any matter opened on cross.)

Ans. I recall Gen. McAllester, but not at that time, but afterwards, as having seen the same sketch.

Cross-examination resumed:

Cross-int. 268. Was anybody present when Gen. McAllester saw this?

Ans. I think not, positively.

Cross-int. 269. What business connections have you now with Mr. Allen and Mr. Lamson? What joint enterprise or scheme?

(Objected to as immaterial.)

Ans. No joint enterprise or scheme; they are assisting me as friends, that is all.

EDWIN L. BRADY.

The foregoing examination I signed immediately on its being taken, and without reading or hearing it read, upon the agreement of counsel that I could make below the examination any corrections I found should be made upon reading the examination. My answers to Mr.
198 Lothrop's questions, inquiring when and where and from whom I received any information about the Enoch Train, and of the mode she was employed in dredging, I wish to correct to read as follows:

Shortly after respondent's affidavits were made, opposing my application in this case, I hunted among the tugboatmen in New York and found one Flinn, who said he had been employed on the Enoch Train when a tugboat, and had seen her at New Orleans after she had been fixed up for use as a dredge-boat, and he gave me a description of her, and made a drawing on a log. I refer to Mr. Lothrop's questions on folios 20 and 41.

EDWIN L. BRADY.

Exhibit G.—C. W. N., commissioner.

Some time in March, 1858, while passing in the mouth of the Mississippi River, I conceived my first idea of deepening the channels of rivers by agitating the mud forming the bars at mouths of same, putting the mud in solution with the water, and the current carrying the mud out to sea. In September, 1861, while at Saybrook, mouth of Connecticut River, I observed a difficulty in the landing of a railroad ferry-boat, owing to the fact that the slip had become partially filled up with mud, so that the boat had great difficulty in getting to her

dock. I suggested to an official of the boat that if he backed a propellor boat I saw there into the slip and lashed her there, afterward working the propeller violently, it would wash the mud out of the slip and relieve the difficulty. The plan was tried with successful result.

In December, 1865, on my way from New York to New Orleans, La., I observed vessels aground at the Southwest Pass of the Mississippi River, and it occurred to me that the difficulty could be remedied only by agitating the mud, and conversed with several persons while passing the spot on that subject, and suggested that I could design a suitable vessel or dredge-boat for the purpose, fitted with a propeller at each end, and as it was desirable that such a boat should be able to operate at various depths, that said boat might be fitted with water compartments, and by filling or emptying the compartments with water, the boat, with all her machinery, could be raised or lowered at pleasure.

199 This was my first conception of a definite plan of lowering a dredge-boat constructed with a series of water compartments so proportioned and arranged that as they are filled with water the boat can preserve an even keel, and the dredging mechanism be brought into action without any adjusting devices.

Immediately after my arrival at New Orleans, in December, 1865, I commenced making pencil sketches or drawings of dredge-boats, embodying the above-named principles, and exhibited the same to many of my acquaintances, and had many discussions as to feasibility of my plan. I made a sketch in my memorandum book about New-Year's day, 1866, which I now have, and which is herewith produced and marked Exhibit D, C. W. N., commissioner. At this time, and for several months subsequent, almost all large vessels, especially steamers, were detained at the river's mouth, owing to the shallowness of the channels on the bar. I advised several ship owners and agents to order their propeller ships to be backed on the bar stern first, and to dig their way over with their propeller screws. The steamer Missouri did this successfully, at my suggestion. I advised the agents of the Boston and New Orleans steamer Concordia to try the same plan. They agreed to employ me to get her over after my method. She had been there some time detained. They gave me a letter addressed to her captain, Winthrop Sears, directing him to afford me facilities for trying my plan on his vessel. Said letter I herewith exhibit, and is marked Exhibit E, C. W. N., commissioner. But before I reached the Concordia she had succeeded in getting over the bar.

I also advised the agent of the English line of steamers to endeavor to get his two steamers over the bar in the same way. I offered to get them over for $1,000 each, and nothing if I failed; but his captains were unwilling to risk any accident to their rudders. I made other sketches of dredge-boats, developing my plans at other times before my departuse from New Orleans to Boston, which was in latter part of June, 1866.

I returned to New Orleans late in October, 1866. Shortly after my return to New Orleans I saw in the newspapers that the government, by its agent, Brevet Lieut. Col. A. D. McAllester, were advertising for proposals to deepen the channels at the Southwest Pass, Mississippi River. I associated myself with other persons with a view to an-

200 swer said proposals by an offer to deepen said channels at Southwest Pass For this purpose I met said McAllester many times in November, 1866. At the third of said interviews between me and said McAllester, *I told him that I had a better and different plan of dredge-boat than the one me and my associates had proposed to him to use

in the performance of this contract, and I showed him a pencil sketch in my memorandum book embodying my plan, and which is now covered by my said patent; but I told him I had not referred to my plan before, as the small United States appropriation of $75,000 would not build such a boat on my plan, and that the dredge-boat Wiggins, that we had proposed to use on the contract, might answer a temporary purpose, and perhaps earn the $75,000. He inquired how much such a boat ought to cost to build. I replied, perhaps $250,000. He said perhaps the United States would make a larger appropriation; and if so, and he had the decision, he would recommend my plan.*

(**Mr. Lothrop, respondent's counsel, objects to the conversation with McAllester.)

I and my associates entered into contract with McAllester for doing the work with the Bishop cones attached to the boat called the Wiggins Ferry. This was an agitating plan, but the machinery lowered down from the boat to the bottom of the river, and could be hoisted at pleasure; the boat always remaining on the surface, and not sinking.

I superintended the adaptation of the machinery to the Wiggins for this purpose, and went to the bar of Mississippi River in command of her and directed her operations there; while at this work on board the Wiggins, I was still further developing my plan of dredge-boat by making full drawing, and the drawing attached to my caveat aforesaid was made there about the first week in April, 1867. I mailed it to the Patent Office in May, same year; it remained on my drawing board in my room, on the Wiggins Ferry, nearly all the month of April, 1867, and was exhibited to pilots, river captains, and also to Lieut. D. W. Payne, who was assistant to said McAllester in the inspection of the work under contract. Said Payne made the lettering on the drawing of my said dredge-boat, which is attached to my letters patent—said lettering being that below the said drawing, commencing with the words "Edwin L. Brady's Bar Excavator," and ending with the word "minnit."

201 On my first return to New Orleans from the Wiggins, I gave the aforesaid McAllester a completed drawing; this was about May 7, 1867; afterwards made supplementary drawing with different arrangements of mud-fan or agitator on the bow, and gave a tracing of same to McAllester, also sent one to the Patent Office, to be attached to my caveat already on file there. [In the early part of July, 1867, said McAllester suddenly departed from New Orleans, taking with him at least five different sketches or drawings made by me, all embodying the essential principles of my patent dredge-boat, which I afterwards obtained letters patent for, dated December 17, 1867, from the United States.]

(Objected to as immaterial and incompetent.)

About this time I sent by mail to Major-General Humphrey, Chief Engineer, United States Army, headquarters Washington, an official letter [in which I enclosed a copy of my drawing of my said plan of dredge-boat, requesting its consideration and adoption under the appropriation of Congress just made for the improvement of the mouth of the Mississippi River] (objected to, stating the contents of written instruments), envelope enclosing it, which are marked F and F′, C. W. N., commis- and I received his reply thereto, which I herewith produce, with the sioner, [which letter stated that my letter had been referred, with the tracing or drawing, to Brevet Brigadier-General M. D. McAllester for his consideration.]

(Objected to, stating the contents of written instruments.)

Soon after I came to New York to see McAllister, and saw him in New York about September 1st, 1867. [He informed me that he advertised the day before my arrival for proposals to build such a boat, and showed me the newspaper. He said he hoped I would not agitate the subject of a patent fee until he had made a contract with some party to build, as the price would be increased thereby. He inquired if I actually had my patent in my possession, and I replied that I had not, but that I was fully protected by my caveat. He inquired about the nature of caveats, and if any person could get copies. He said he had a man making the working drawings and model to be used as a guide for the contractors, and that specifications were in hands of printer, and would send me a copy; and he requested that I would call on him to
202 inspect the model as soon as completed. Shortly after I received by mail from him a copy of specifications, but I never met him after that time.]

(Objected to as incompetent, immaterial, and hearsay.)

I cannot fix the exact day on which I filed my application for patent at Patent Office, but it was before I saw McAllester in New York; and I had just returned from Washington on that business when I called on McAllester.

Exhibit G².—C. W. N., commissioner.

I did speak to said McAllister in relation to my said invention before obtaining said patent. The first time I spoke to him about it was at New Orleans, in November, 1866, at his private office in Camp street. I described to him my plan for dredging the bar by a dredge-boat, having an agitator at the bow to stir up the mud, the boat to be raised and lowered at pleasure by filling or emptying certain water compartments with which the boat was to be fitted at this time. I showed him a rude sketch of such a boat which I had drawn in my memorandum book which I had with me at that time. This was the same sketch or plan that I have testified to in this deposition, which is to be annexed hereto, and which is marked Exhibit D., C. W. N., commissioner. I met McAllester frequently after this, until he left New Orleans for the North. I think he left New Orleans the latter part of June, 1867. The second time I described and spoke of my said plan to McAllester was at an intermission of a performance of an opera at the St. Charles Theatre, in New Orleans; I think in last week of November, 1866. I again spoke with McAllester particularly as to my plan on the dredge-boat Wiggins Ferry, in my private room in the last part of February, 1867. No further particular conversation occurred about this plan until early in May, 1867, when I had a full conversation with him at his office in Camp street, New Orleans, about the plan, and spoke with him about the government's adopting it. Previous to his departure I again had further conversation with McAllister about my said plans, and to have government adopt my plan, and which he assured me then, as he had several times before, he would use his influence to have adopted.

203 *Exhibit G³.—C. W. N., commissioner.*

Between the times inquired about I made many sketches and drawings representing my said plan, commencing a few days after my arrival at New Orleans, 1865, and ending just prior to my making application for said patent. I made many drawings and sketches on drawing

paper, on tracing muslin, on letter or writing paper, and on chips, or wood. I cannot describe all of them particularly, further than to say that they all embodied the principles of an agitator at the bow of the boat, and an arrangement of water tanks or compartments for the purpose of raising or lowering the boat at pleasure by means of water. The plans varied somewhat in the style and shape of the agitators, also as to the proportions of the boat and water tanks. Many of the rude sketches were destroyed. Two drawing' were in my trunk, which was lost. Other drawings I gave away to persons who desired them. I gave four drawings of said plans to said McAllester before he went away from New Orleans, in June, 1867. One drawing I sent to Gen. Humphreys, which was afterward in McAllester's possession. One drawing of external view I placed in a wooden frame and left it on the mantle over fire-place in front office of New York Mail Steamship Company's office in New Orleans, in May, 1867. Another drawing I sent with my caveat to be filed in the Patent Office. Another drawing I sent as supplementary to be annexed to my caveat. Another drawing I sent with my application for patent; also a tracing on muslin at same time. The one that Israel W. Lamson testified to having seen at my office in Montgomery street, Jersey City, three or four weeks ago, showing different kinds of agitators, I loaned to a Mr. Black, who promised to return it to me in a few days; this was in the latter part of June last, shortly after Lamson saw it. Said drawing has never been returned to me, and after being told by my counsel to get it, I have used every effort to get it, but have been unable to do so or to learn anything of the whereabouts of said Black, except that he had departed for China.

The only drawings now in my possession and under my control are the ones I have already testified to in my memorandum book? one other pencil sketch made by me in New Orleans within a few days after April 26th, 1866, and which I herewith produce, and which is marked Exhibit H, C. W. N., commissioner; also, one other drawing, marked Ex-
204 hibit A, C. W. N., commissioner, made by me in Bourbon street, New Orleans, in the spring of 1866. The flag, and letters on the flag, I added to the drawing about a year ago.

Also one other drawing, marked Exhibit I, C. W. N., commissioner, which was made by me at the mouth of the Mississippi River late in March or first of April, 1867. Also two tracings of drawings on muslin attached to my certificate of caveat, marked Exhibit C, C. W. N., commissioner; also the tracing or drawing attached to my letters patent, marked Exhibit B, C. W. N., commissioner, both of same already produced.

The tracing annexed to Exhibit C, and marked filed July 6th, 1867, is a copy of an original tracing and file in Patent Office which I made about ten days before July 6th, 1867, from an original drawing, slightly modified as to mud-fan, made by me in the spring of 1866; the other original tracing attached to my caveat in Patent Office was made by me the last of March or first of April, 1867, from the original drawing I have already produced, and which is marked Exhibit I, C. W. N., commissioner.

The tracing annexed to my patent, Exhibit B, I made in New Orleans, late in June, or first days of July, 1867, except the lettering at the bottom, which was made by Lieutenant D. W. Payne. I cannot now recollect the names of any persons to whom I gave any of said drawings or sketches, except as I have hereinfore stated, and don't know where said drawings or sketches so given away now are.

Deposition of Nelson Curtis.

Direct examination by counsel for complainant:

Int. 1. State your name, age, residence, and occupation or profession.

Ans. My name is Nelson Curtis; age, forty years; residence, East Boston, Massachusetts; and occupation, agent of the Atlantic Works, the defendants.

Int. 2. How long have you been connected with said Atlantic Works, and in what capacity?

205 Ans. Since their establishment in 1853; first as clerk and assistant draughtsman for about eighteen months, and as treasurer and agent since; as agent during the past four years.

Int. 3. What have been your duties as such agent?

Ans. I have made the estimates, contracts, purchases, and sales in the business of the Atlantic Works, defendants.

Int. 4. What was the business of the defendants?

Ans. Construction of steamships, both iron and wood; iron sailing-vessels, boilers, and heavy machinery generally.

Int. 5. And dredging-boats?

Ans. Yes; that comes under the head of heavy machinery generally.

Int. 6. What dredging-boats were built by said Atlantic Works? If any, please specify names thereof.

(Sixth interrogatory objected to by respondents.)

Ans. The dredging-boat Essayons was the only one built by the Atlantic Works.

Int. 7. When?

Ans. It was built between the 20th day of October, 1867, and the 1st day of May, 1868.

Int. 8. Describe said dredging-boat Essayons.

Ans. I should describe it as a wooden vessel of about eight hundred tons measurement, supplied with powerful machinery in the form of a pair of engines and propeller-wheel in forward end, and a single engine and propeller-wheel in the after end, with suitable connections to boilers in the centre, together with water-tight compartments arranged so as to be filled and emptied at pleasure.

Int. 9. Please describe the rise of said water-tight compartments and their position or arrangement in said dredging-boat Essayons.

Ans. I can describe them generally by saying that these water-tight compartments occupied a large portion of the lower hold in the centre of the vessel [and *more* of sufficient capacity to change the draft some four to six feet by filling and emptying]. They never distributed along the central portion of the vessel.

(Portion in brackets objected to by respondents.)

Int. 10. What was the object of said water-tight compartments?

(Objected to by respondent's counsel, who cross-examined the witness upon his competency as an expert (against plaintiff's objection), as follows, viz:)

206 Cross-int. 11. Have you ever seen the Essayons operated in dredging?

Ans. Yes, sir.

Cross-int. 12. Where, and to what extent?

Ans. In Boston harbor, on her trial trip.

Cross-int. 13. Never at the mouth of the Mississippi, or where she was actually engaged in removing obstructions, except her trial trip?

(Objected to by plaintiff.)

Ans. No, sir.

Cross-int. 14. Did you ever witness the operation of any other dredge-boat; and, if so, to what extent?

Ans. Yes, sir; many of them for many hours.

Cross-int. 15. What kind or description of dredge-boats were they?

(Objected to by plaintiff.)

Ans. The various descriptions used in the harbor of Boston and New York. I have seen them operating with scoops, buckets, and claws.

Cross-int. 16. Did any of them have water-tight compartments?

(Objected to by plaintiff.)

Ans. I cannot say.

Cross-int. 17. Your only knowledge of the object of the water-tight compartments in the Essayons is derived from what you saw on the trial trip, and from hearsay, is it not?

(Objected to by plaintiff.)

Ans. It is, except as I saw them filled and emptied at the dock before the trial trip.

(The witness now answered the tenth direct interrogatory, as follows, viz:)

Ans. To change the draft of the vessel.

Int. 18. State whether or not said water-tight compartments were so placed and proportioned, that said dredge-boat Essayons could sink with an even keel.

(Objected to by respondents.)

Ans. They were.

Int. 19. Did you ever see said dredge-boat Essayons operate? If yea, when and where?

Ans. Yea; in the harbor of Boston, on her trial trip.

207 Int. 20. Describe the mode and manner of her operating when you saw her operate.

Ans. Her engines were started slowly to carry her forward in the mud bank, in the harbor. The operation of her forward propeller extending below the keel was such as to cut a channel in front of the vessel, by throwing the mud backward, the vessel was raised or sunk during the operation. What we did was to run into the bank and back when the tide was rising.

Int. 21. Was there any occasion to use the water-tight compartments on that trial?

(Objected to by respondents.)

Ans. There was not.

Int. 22. Did you see the water-tight compartments filled, or partially filled? If yea, state when and where, and the effect as to changing the draft of said boat.

Ans. I did. At a trial in the dock to test them, and the effect was to sink the boat when they were filled, and raise it when they were empty.

Int. 23. State the effect as to sinking on an even keel on that occasion.

(Objected to by respondents.)

Ans. I don't see how to answer that question. I do not understand the question.

Int. 24. Did the boat on that occasion sink uniformly, one end the same as the other, or did one end sink faster than the other?

Ans. I cannot recollect.

Int. 25. To what extent was dredging done by said Essayons, that you saw on her said trial trip?

Ans. She cut a channel half her length, from three to five feet deep.

Int. 26. Please describe said water-tight compartments a little more particularly, as to how far they extended on said boat, and their position as to the center of the boat?

Ans. They extended about seventy feet of the length of the boat, and the average bulk was a few feet forward of the center.

Cross-examination resumed:

Cross-int. 27. By "forward of the center," you mean towards the end where the mud-screw or the large propeller is, do you not?

208 Ans. I do.

Cross-int. 28. In describing said dredging-boat Essayons, you have omitted the rake and scraper, have you not, and will you please describe them?

(Objected to as incompetent on cross-examination and generally, by plaintiff's counsel.)

Ans. Yes. There were two rakes or scrapers alike, one at each end, in form like a wooden hay-rake, but made of heavy iron, with steel teeth. They were raised and lowered by a chain passing through a heavy boom to the top, a short stout mast, and thence downward to the capstan.

Cross-int. 29. Were these tested on the trial trip?

Ans. They were tested on this trip, but not on the excavation I have before testified to.

Cross-int. 30. Each water-tight compartment had a gate, had it not, by which it was filled by opening the gate?

Ans. It had.

Direct examination resumed:

Int. 31. Describe how said water-tight compartments were filled and emptied?

Ans. A pipe passed through them, connecting with the out-board and with the pumps, by means of which they were emptied and filled by the use of gates, making or cutting off the connections in either direction. Each pump was worked by a pair of small steam-engines, one located in each end in the engine-room.

Cross-examination resumed:

Cross-int. 32. You mean to say that the gate to each compartment was opened as it was required to fill that compartment?

Ans. Yes, sir; so that either end could be depressed at pleasure.

Cross-int. 33. The engines were independent of each other, were they not?

Ans. They were.

NELSON CURTIS.

209 *Exhibit F.—C. W. N., commissioner.*

ENGINEER DEPARTMENT,
Washington, July 16, 1867.

Mr. EDWIN L. BRADY, *New Orleans, La.:*

SIR: Your letter of the 9th inst., enclosing tracing of your device, as arranged for deepening channels at the mouths of rivers and harbors, has been received at this department and referred to Brevet Brig.

Gen. M. D. McAllester, the engineer officer in charge of the improvement of the mouth of the Mississippi River, for his consideration.

By order of the Chief of Engineers.

Very respectfully, your obedient servant,

J. C. WOODRUFF,
Lieut. Col. of Engineers,
Brevet Brig. Gen. U. S. A., Assistant.

Exhibit F[1].—C. W. N., commissioner.

Mr. EDWIN L. BRADY,
Care Creevy, Nicholson & Co.,
New Orleans, La.

Exhibit N.—C. W. N., commissioner.

NEW YORK, *Oct.* 5, 1867.

EDWIN L. BRADY, Esq.:

DEAR SIR: Your letter of the 25th ult. reached the city during my absence; otherwise I should have replied sooner. The contract for building the dredge-boat has not yet been awarded. Contractors are given until the 12th inst. to submit proposals.

210 I am unable to inform you who will superintend the building of the vessel. Very truly yours,

D. W. PAYNE,
Lieut. Commanding.

Exhibit N[1].—C. W. N., commissioner.

EDWIN L. BRADY,
Stamford, Conn.

From Lieut. PAYNE.

211 EVIDENCE FOR DEFENDANT.—TAKEN PURSUANT TO THE 67TH RULE OF THE SUPREME COURT OF THE UNITED STATES AS AMENDED.

Deposition of D. W. Payne.

Direct examination by counsel for defendant:

Int. 1. What is your name, age, residence, and occupation, and what has been your occupation for the past few years?

Ans. My name is D. W. Payne; age, 26 years; reside at Corning, N. Y.; am engaged in the machinery business; have been an officer of the Army, 1st lieutenant of engineers, for the past four years preceding June last. My resignation from the Army took effect on the 1st of October.

Int. 2. Do you know anything as to the government plans for deepening the mouths of the Mississippi River; and, if so, what do you know, and what duty had you in connection with them? When did it begin, and when end?

(Objected to as calling for hearsay and matters transacted by other parties.)

Ans. I know the government plans for building a dredge-boat, and I am also acquainted with the operations of certain parties who con-

tracted with the government in the fall of 1866 to deepen the channel at the Southwest Pass of the Mississippi River. I was assigned to duty by General McAllester, who had charge of that work, in November, 1866, as inspector, on the part of the government. I continued in that position until the contract was annulled. In October, 1867, I was ordered to Boston to take charge of the building of the United States dredge-boat Essayons. After her completion I was placed in immediate charge of her operations and Pass a l'Outre, and continued in charge until the 14th of August, 1869.

Int. 3. Where were you when first ordered to duty on matters connected with the deepening of the mouths of the Mississippi, and where was General McAllester; and where was your duty during the autumn and winter of 1866 and '67?

212 Ans. I was in New Orleans when first ordered to that duty; General McAllester was also at New Orleans. I was stationed at New Orleans at the United States engineer's office during the autumn and winter of 1866 and '67.

Int. 4. Who had charge of this office at that time, and of the matter of deepening the mouths of the Mississippi? Where is he now?

Ans. General McAllester. He is now dead.

Int. 5. When did he first take charge of it; and during what period did he remain in charge of this work?

Ans. I think the work was assigned to his charge in September, 1866. He had had charge of the engineer office since January of that year. He remained in charge of that work until the 4th day of December, 1868. He was then ordered to Buffalo, N. Y. I think he died the 13th of April, 1869.

Int. 6. Do you know Edwin L. Brady, the plaintiff in this suit; and, if so, when and where did you first see him?

Ans. I do know him. I first saw him at the engineer office in New Orleans in the fall of 1866.

Int. 7. How did he happen to come there? Was he alone, or in company with others; and, if so, with whom? Had he any business there; and, if so, what?

Ans. He came there in company with Mr. Bishop, I think E. B. Bishop, to see General McAllester, in reference to letting the contract for deepening the channel of Southwest Pass.

Int. 8. What contract do you mean, and what had General McAllester to do with it?

Ans. General McAllester had charge of the work of improving the mouth of the Mississippi River, and the contract referred to was that for which proposals were invited in the fall of 1866, for deepening the channel of Southwest Pass, the proposals being invited by the government through General McAllester.

(So much of answer as relates to matters in writing or print objected to.)

Int. 9. Who was Bishop, and what business had he with General McAllester, and how did Brady happen to come with him?

(Objected to as immaterial and irrelevant.)

213 Ans. He has no particular business that I know of. He claims to be an inventor. He came to see General McAllester in reference to the using of his scheme for deepening the channel at the mouth of the river. He was anxious to bid for the contract. He was unable to do so without associates, and Brady, who came with him, was one of his associates. Mr. Bishop lives at New Orleans, and I think lived there at that time.

Int. 10. What was Bishop's scheme; do you know whether it was adopted, and how came it to be?

(Objected to as irrelevant, and as calling for hearsay of matters inter alios.)

Ans. His scheme was to attach to the bow of a steamer two iron cones, having their axes inclined to each other in the same plane, round which cones were wrapped helicol iron flanges. The cones were so arranged in a frame that they could be raised or lowered at pleasure. The boat was propelled by an ordinary centre paddle-wheel. The plan was adopted by the government. This plan was adopted, because the bid of those parties who supported Mr. Bishop was lower than that of any other bidder. This bid was made by Mr. Horace Tyler, and he appeared as the contractor.

(So much of this answer as is hearsay or secondary evidence objected to.)

Int. 11. In this plan how was the channel to be deepened?

(Objected to as irrelevant and immaterial.)

Ans. The channel was to have been deepened by lowering the cones to the bottom of the river and revolving them as the boat moved up stream; depending upon the current of the river to carry away the mud as it was stirred up.

Int. 12. How was the mud stirred up?

Ans. By the revolution of the flanges of the cones, or rather by the revolution of the cones while the flanges were in contact with the bottom of the river.

Int. 13. What, if anything, had Brady to do with this contract?

Ans. Brady was in charge of the operations of the boat, as agent of the contractors, and was associated with Mr. Tyler and Mr. Creevy and Mr. Bishop, in supplying funds for the work, and had an eighth or fourth interest, or something like that. I am not positive how much.

Int. 14. When was the contract awarded to Tyler, and after that what was done to carry it out, and what did Brady do in the matter? Please to state from the time the contract was awarded till March 19th, 1867.

214 Ans. The contract was awarded in the early part of December, 1866, I think. They commenced at once to fit up a boat with Mr. Bishop's screws, and Brady superintended the work for the contractors. The boat was finished about the 19th of March, 1867, and on the 19th she started for the Southwest Pass.

Int. 15. During this period, from December, 1866, to March 19th, 1867, did you see Brady; and if so, when, where, and how often?

Ans. Yes, sir; I used to see him frequently at the United States engineer office and on board of the Wiggins, which was the name of the boat they were fitting up. I can't say how often I saw him, but nearly every week-day.

Int. 16. During this period did you ever hear him talk about the deepening the channels at the mouth of the Mississippi; and if so, how often?

Ans. I used to hear him speak very confidently of the success of Mr. Bishop's scheme, at least of the ultimate success of it. I heard him express himself so at the engineer office; I can't say how often.

Int. 17. During this period did you ever hear him suggest any other plans or schemes for deepening the mouths of the Mississippi.

Ans. No, sir; none that I recollect.

Int. 18. During this period do you know of any other plans being suggested to Brady or described to him; if so, when, and where was it,

and by whom; what was the plan and what did Brady say to it? State as fully as you can.

Ans. Yes, sir. In the latter of February, 1867, at the engineer office, New Orleans, Gen. McAllester told Brady that he had doubts of the successful working of the Wiggins, and in case of her proving a failure, he should suggest to the engineer department a plan of his own for doing that work, which plan he then explained to Brady in my presence. He said he should recommend the building of a strong vessel provided with propellers at each end, and arranged with water-tight compartments, so that the vessel could be raised or lowered at pleasure. She was also to be provided with scrapers which could be attached at either end, and raised or lowered at will by machinery. She was to have rudders at each end, and be able to move in either direction, either head or stern, equally well. He proposed to try the scrapers first, and if they were not found to work satisfactorily, to try any other device
215 which might be thought practicable. Brady seemed to be much pleased with the idea, but seemed confident of the success of the Wiggins.

(Last paragraph objected to as irresponsive and inadmissible.)

Int. 19. Did Brady, when Gen. McAllester told him this plan, say anything as to its novelty, or anything as to his having any similar plan?

Ans. No, sir. I don't recollect his saying anything about its novelty, or admit his having had a similar plan, or of his having ever heard of this plan being proposed before.

Int. 20. Did he say anything as to a similar plan or idea having occurred to him?

Ans. No, sir.

Int. 21. Did he say anything as to his having made drawings for such a plan?

Ans. No, sir.

Int. 22. Did he ever show you, or did you ever see, or did you know of his having shown General McAllester, or any one else, before the 19th of March, 1867, any such drawings?

Ans. No, sir.

Int. 23. Do you know of General McAllester, prior to this interview with Brady, having developed the same plan; and, if so, when and where?

Ans. I have seen a letter he wrote to the U. S. Engineer Department embodying the same ideas. This letter is printed in the Executive Documents of 39th Congress, second session, No. 55 and No. 56, page 236–240, printed at Washington at the Government Printing Office, 1867. When I say the letter, I mean I have seen the printed letter.

(Objected to as irresponsive and containing secondary evidence.)

Int. 24. When did the Wiggins sail? How long after this conversation between McAllester and Brady?

Ans. She sailed on the 19th of March; it was about three weeks after the conversation that she sailed.

Int. 25. Did you and Brady both go down in her?

Ans. Yes, sir; and Gen. McAllester was also on board.

Int. 26. Did Brady do anything on board as to drawings or plans for dredging; and, if so, what?

Ans. Yes, sir; a week or ten days after the vessel arrived at
216 the Southwest Pass, and directly after Gen. McAllester returned to New Orleans, Brady made a drawing of a dredge-boat having two cones attached forward, which were worked by engines attached to

the shafts of the cones, and the cones being provided with a series of flanges similar to these on Mr. Bishop's screw, with the exception that they were not continuous. According to the drawing, the boat was provided with water-tight compartments by which she could be raised or lowered. She was to be propelled by two propellers aft. On one part of the sheet, on which this drawing was made, there were two or three drawings of screws, which were intended to be used in place of the cones, if thought best or desired. There was no arrangement shown for attaching scrapers, or anything of that kind. Several tracings of this drawing were made, and I assisted him in making and lettering one of the tracings.

(Objected to as containing secondary evidence and conclusions and inferences of the witness.)

Int. 27. How long was Brady engaged in making these drawings?

Ans. I can't say positively. He was at work at them perhaps a week or more. He did not work at them continuously, but at odd times.

Int. 28. Did he show the drawings to you; and, if so, when? What did he say to you—anything as to its being an old plan of his?

Ans. He was making them in his room, which was used as a cabin, and these drawings were lying upon a drawing-board in the room and open to inspection at any time. I saw the drawings during the time that he was at work upon them. He said nothing to me about its being an old plan of his.

Int. 29. Did he ever say anything to you about this drawing or plan; if so, what or when?

Ans. Yes, sir; he used to talk frequently about it. He thought it was an improvement upon Bishop's plan. One advantage that he claimed was that the boat could be raised and lowered on an even keel and the cone brought in contact with the bottom without the device of Mr. Bishop for lowering and raising the cone.

Int. 30. Prior to this drawing on board the Wiggins, did you ever know or hear of Brady's making any drawings of plans for deepening the mouth of the Mississippi, or any suggestions of any plans or improvements, or modifications of plans or modes for doing this?

217 Ans. No, sir. I did hear him once tell about the Matanzas, working across the bar, stern foremost. That is the only thing I ever heard. The Matanzas was a screw steamship.

Int. 31. When was this, and where, according to your best recollection?

Ans. It was at the engineer office, New Orleans, I think. It was before the Wiggins went down the river, and I think it was the same time he had the conversation with General McAllester, above referred to.

Int. 32. Please to describe the screws of which you spoke, which were in the corner of the large drawing.

Ans. They were four-bladed screws; one of them was the same as an ordinary ship's propeller, and the blades of another were pointed at the ends.

Int. 33. How many sets or series of these screws were there on a single shaft?

Ans. I can't say as to that. There were four or five of them, I think.

Int. 34. How were they arranged, and were those on the same shaft of the same size, or of different sizes?

Ans. They were different sizes. The largest was near the stem of the vessel and they decreased in size from there to the outer end of the cone.

Int. 35. Have you ever seen this drawing since you saw it on board the Wiggins?

Ans. I am not positive. I saw one similar to it in New York, but whether it was the same I can't say.

Int. 36. Besides this large drawing of which you have spoken and the tracings from it, did you ever, while on board the Wiggins, see any other drawings of Brady's?

Ans. I don't recollect of ever having seen any other.

Int. 37. Will you please to describe the screws which were in the corner of the drawing of which you have spoken? Describe them as fully as you can; their arrangement on the shaft, size, shape, &c., &c.

(Objected to as asking for secondary evidence.

Counsel for defendant calls upon plaintiff's counsel to produce the drawings referred to.)

Ans. As near as I can recollect, there were four or five screws on each shaft; the screws varied in size from the forward end of
218 the shaft to the after end, the largest screw being at the after end. In one the blades were pointed at the end, in the other they were not.

Int. 38. Do you know of Brady's showing this drawing to any one besides yourself; if so, to whom, and what, if anything was said?

Ans. I don't know of his showing it to any one besides myself but Mr. John Roy. Mr. Roy and myself both told him that a vessel built on that plan would be an infringement upon Mr. Bishop's plan.

Int. 39. Did Brady show this drawing to Gen. McAllester, so far as you know?

Ans. Not that I know of.

Int. 40. What became of this drawing, and all the tracings, so far as you know? State fully.

Ans. One of the tracings was sent to Mr. Creevy. I don't know what became of the other tracings or of the drawing itself. I saw a drawing in New York at the examination of Mr. Brady there, before an U. S. commissioner, which was very similar to one made on the Wiggins, and it may possibly be the same one; I couldn't say without examining it more carefully.

Int. 41. Did you make or letter any of these tracings?

Ans. I helped make one of these tracings, and I lettered one there; and I afterwards lettered another, a tracing of a different drawing, at Baroone street, New Orleans.

Int. 42. How came you to letter this tracing on the Wiggins? Was it at Brady's request; and if so, what did he say to you about it?

Ans. It was his request, He said he couldn't letter himself, and asked me to do it for him.

Int. 43. Did he tell you for what he wanted the tracing you lettered; or did he ever tell you what became of that?

Ans. No, sir; I don't know that he did. I don't recollect. He told me when he lived in Baroone street that he had sent a tracing to Washington with his caveat; whether it was one of those made on the Wiggins, I could not say.

Int. 44. Who were Roy and Creevy, of whom you have spoken? Had they anything to do with the Wiggins; and if so, what?

Ans. Mr. Roy was employed in arranging the machinery of the Wiggins; in getting up and arranging it; he was a foreman in a machine-shop. He went down the river on board the Wiggins on the
219 19th of March, and remained on board of her about two weeks. Mr. Creevy was a shipping agent in New Orleans. and was asso-

sociated with Mr. Tyler and the rest in executing the contract made by Mr. Tyler with the government.

Int. 45. You have spoken of General McAllester's informing Brady in February, 1867, of his plan for deepening the mouth of the Mississippi. Do you remember any other conversation between them on the same subject? And, if so, what was it, and when, and where? State fully all you recollect about it.

Ans. They had another conversation on the same subject, in the latter part of May, I think, at the engineer office, in New Orleans, during which, General McAllester showed Brady a letter which he had written General Humphreys, giving a detailed description of the boat proposed by him. The letter contained two pen-and-ink sketches of one end of the boat. After Brady left General McAllester showed me the same letter. I was present during the interview between General McAllester and Brady. I would say this was in May sometime, rather than in the latter part of May.

(Objected to as irresponsive, hearsay, and giving contents of writings.)

Int. 46. Have you any means by which you can fix the date of this interview any more exactly? If so, you will please do so.

Ans. Captain Brady came up to New Orleans shortly after the 5th of May, and this interview took place within a short time after he came to New Orleans that time.

Int. 47. At this interview did Mr. Brady say anything to General McAllester as to his (Brady's) having made an invention for a dredge-boat or proposing to take out a patent?

Ans. I don't recollect that he did.

Int. 48. Did he say anything as to the drawings of which you have spoken, made on board the Wiggins?

Ans. Not that I recollect.

Int. 49. What did General McAllester say to him in showing him this letter, and what did Brady say? State the conversation between them, if you can, at this time, or the substance of it, if you cannot state the exact words.

Ans. I don't recollect the conversation any more than that the
220 general told him that was the plan he was going to present to the department. I don't recollect any more.

Int. 50. When, if you know, did General McAllester begin to write this letter and make the drawings, etc., which he showed to Brady at this time? When did you first see them?

Ans. The first time I knew of it was in April. He began then to get up a specification of his boat; the specifications I refer to are those contained in that letter. He also then made those pen-and ink sketches. I didn't see the letter to read it until he showed it to me after that interview with Brady. I saw the letter lying on his desk and had a glance at the sketches in April. I know that he was writing the letter referred to from some questions he asked me with regard to the usual properties of certain parts of vessels. I think it was in the middle of April. This was during the time I was making the first chart of the channel at Southwest Pass, or rather transferring surroundings which I had taken at Southwest Pass to drawing paper.

(Objected to as hearsay, as conclusions of witness from McAllester's statements, and as giving secondary evidence.)

Int. 51. Please to look at the paper now shown you and marked "Defendant's Exhibit A, H. L. H., Oct. 19, 1869," and say whether or

not it is a copy of the specifications and pen-and-ink drawings of which you have spoken, which Gen. McAllester showed to Brady.

(Objected to as calling for secondary evidence.)

Ans. Yes, sir; it is a copy.

(Objected to as secondary evidence.)

Int. 52. Will you please to look at the paper marked "Defendant's Exhibit B, H. L. H., Oct. 19, 1869," and say whether or not it is a copy of so much of the letter which Gen. McAllester read to Brady, as relates to the dredge-boat he, McAllester, was proposing the government should build?

(Objected to as calling for secondary evidence.)

Ans. Yes, sir; it is a copy.

Int. 53. Did you ever hear Brady communicate, or know of his communicating, to Gen. McAllester, at any time before Gen. McAllester left New Orleans, anything as to the drawing or tracings of which you have spoken, or as to any plan for deepening the mouth of the river, other than that used in the Wiggins?

221 Ans. No, sir; I heard him criticise plans proposed by other parties before that proposed by Mr. Bishop had been accepted by the government.

Int. 54. Did you inform General McAllester of the drawing and tracings? and if so, when, and what did you say to him about them?

(Objected to as calling for conversation, inter alios, and inadmissible.)

Ans. Yes, sir. I told General McAllester, shortly after Brady made his first drawings, that Brady had appropriated his ideas or his plan for raising or lowering the vessel by means of water-tight compartments—by vessel I mean dredge-boat—and that he had appropriated Bishop's plan for agitating the mud; that was for the first drawing. Sometime after I saw the second drawing in Baroone street, I went to New York, and there told General McAllester that Brady had applied for a patent for a dredge-boat, almost exactly like that described in his (McAllester's) specifications to the department.

Int. 55. How did you know Brady had applied for a patent?

Ans. He showed me a letter from the Patent Office, the Commissioner of Patents, I believe, acknowledging the receipt of his caveat.

Int. 56. Where and when was this?

Ans. It was at his room in Baroone street, in June, 1867. I think it was June. I am not positive about that. It was in the summer, in June or July, I am not certain which.

Int. 57. What was the drawing of which you have spoken, and which you saw in Baroone street; and when did you see it?

(Objected to as calling for secondary evidence.

The defendant's counsel requests plaintiff's counsel to produce the drawing, and plaintiff's counsel replies that he hasn't it.)

Ans. The drawing represented a vessel arranged with water-tight compartments, and having a propeller at each end. The forward one was larger than the one aft, somewhat larger; then, I think the blades were pointed, though I am not certain about that, pointed at the ends. These were separate engines for driving each of the propellers. I saw it in the summer of 1867, at the same time Brady showed me his letter from the Patent Office.

222 Int. 58. Did you ever see this drawing before Gen. McAllester showed to Brady the letter and specifications of which you have spoken, in May, 1867?

Ans. No, sir; I don't recollect of having ever seen it before.

Int. 59. Was it one of those made, and which you saw, on the Wiggins?

Ans. No, sir.

Int. 60. How did it differ from the drawing made on the Wiggins? If you say it did so in the mode of stirring up the mud, describe the difference in this respect.

(Objected to as calling for secondary evidence.)

Ans. The one made on board the Wiggins had cones, long cones, with flanges attached forward; but the one I saw in Baroone street had only a propeller forward. The one on the Wiggins had also in one corner of it two long shafts with several propellers of different sizes fastened to them. There was nothing of this kind on that I saw in Baroone street.

Int. 61. How many cones had the one made on the Wiggins, and to what part of the dredge-boat were they fitted?

(Objected to as calling for secondary evidence.)

Ans. Two; they were fitted to the forward part of the vessel; one on each side of the keel; and there was an overhang which projected beyond the forward ends of the cones to which were attached the supports for the forward ends of the cones.

Int. 62. Do you mean that the drawing made on the Wiggins showed two cones with flanges fitted and projected, one each side of the bow?

Ans. One on each side of the keel forward.

Int. 63. How near the bow?

Ans. Directly at the bow or stem.

Int. 64. What angle did these cones make with each other?

Ans. Their axes were horizontal and parallel to each other.

Int. 65. What angle did these cones make with the keel of the vessel?

Ans. Their axes were parallel with the keel of the vessel.

Int. 66. Were there in the corner of the drawing two shafts with
223 a series of graduated screws on them, which it was said might serve, or be used, as a substitute for the cones?

(Objected to as asking for secondary evidence and as leading.)

Ans. Yes, sir.

Int. 67. Please to describe the drawings of the shafts in the corner. State whether or not there was one or more than one screw on each; whether or not the screws were of the same size or graduated; and what was said, if anything, as to their use. Whether or not they were to be used as a substitute for the cones shown in the large drawing, or how they were to be used?

(Objected to, as asking for secondary evidence and hearsay.)

Ans. There were two drawings of shafts in one corner of the sheet, with several screws of different sizes attached to each shaft. The screws increased in size from the forward end of the shafts to the after end. Under them I think was a note, a written note, to the effect that either of the above forms might be used in place of that shown as attached to the vessel in the drawing.

Int. 68, In any drawing made by Brady before his interview with Gen. McAllester, in May, 1867, of which you have spoken, was there or not any other device for stirring up the mud, except one consisting of two cones or a series of screws on each side of the vessel near the bow, and which you have said you told him was an infringement of Bishop's patent?

Ans. I don't recollect of having seen any other drawing before that time, showing any other device for stirring up the mud.

Int. 69. When did you see the first drawing of his with a single screw at the bow like a double-ender propeller?

Ans. The first time, I think, was in his room, in Baroone street, in June or July, 1867, the time of which I have already spoken.

Int. 70. When did General McAllester leave New Orleans? Where did he go? What did he do, and how long so occupied, and with whom? (Objected to as immaterial and irrelevant.)

Ans. He left New Orleans in the early part of June, 1867, and went to New York City, and was engaged there in getting up specifications and drawings of the dredge-boat and making proposals and contracting for building the same. He remained there until the latter part
224 of November, 1867. He was engaged with Mr. Horatio Allen, of the Novelty Works, and Mr. Trowbridge, in arranging specifications for the machinery of the boat; and with Mr. Steers, of Williamsburg, in arranging the specifications and drawings for the hull; with Mr. Oliver Edwards and Franklin W. Smith, in contracting for building of the boat.

Int. 71. Besides the drawings of which you have testified, and which you saw on board the Wiggins, and in Baroone street, did you see in New Orleans any other drawings of Brady's?

Ans. No, sir; not that I remember.

Int. 72. In the dredge-boat built here for the government, what are the appliances fitted for stirring up the mud? Describe them all.

Ans. She was provided with two large iron scrapers, one of which could be attached to either end of the vessel. There was a screw at each end. The forward screw was the largest; the blades extended two feet below the bottom of the keel. There was an iron keel, a mud keel, attached to the forward part of the keel which extended three feet below the bottom of the keel proper. These were all the appliances except the machinery.

Int. 73. How were the scrapers to be brought in contact with the mud?

Ans. One end of each scraper was attached to an iron hook fastened to the stem of vessel, the other end, where the head of the scraper was, the outer end or head of the scraper, was lowered by the machinery until it came in contact with the bottom of the river.

Int. 74. Do or not the drawings on the paper marked "Defendant's Exhibit C, Oct. 19, 1869, H. L. H.," show generally and substantially the scrapers and mode of attachment?

Ans. No, sir. The scrapers on the Essayons had long handles, on one end of which was an eye, at the other end were heavy cross beams to which were fastened broad iron teeth. The scrapers were hooked on at the middle of the stem and stem post. There were no scrapers attached to the sides as shown in that exhibit.

Int. 75. How were they hooked on? by a hook through the eye of the handle, or how otherwise? To what part of the vessel was this hook made fast?

Ans. There was a hook made attached to the stem post and another to the stern post; these hooks passed through the eyes in the handles of the scrapers.

225 Int. 76. How were the scrapers hung, parallel to the keel or at right angles, or how?

Ans. The heads of the scrapers were at right angles to the keel; I

made a rough drawing, which is hereto attached, marked H. L. H., Oct. 19, 1869, X.

Int. 77. Is or not the Essayons submerged, to use the screw at the bar for stirring up the mud?

Ans. Yes, sir; and also to use the scrapers.

Int. 78. When so submerged for this purpose, is one side depressed, or how is it? Please describe.

Ans. The forward end of the vessel is depressed from two to three feet more than the after one.

Int. 79. Do you know of the use of water-tight compartments to submerge vessels prior to their employment for this purpose in the Essayons? If so, in what vessel?

Ans. They were employed in the Enoch Train for the same purpose as that for which they are used on the Essayons.

Int. 80. When and where were they so employed in the Enoch Train?

Ans. At the mouth of the Mississippi River, in 1860. All I know about the Enoch Train is what I have been told by the owner, and some parties who saw her in operation.

(Plaintiff's counsel objects to all that has been testified to about the Enoch Train as hearsay.)

Int. 81. What was the Enoch Train used for at the mouth of the Mississippi, and when so used was she submerged on an even keel, or was one end depressed?

(Objected to as asking for hearsay.)

Ans. She was used as a dredge-boat, or for deepening the channel at the mouth of the Mississippi River, in 1860, and when in operation one end was always depressed more than the other.

Int. 82. How did she operate to deepen the mouth of the Mississippi River?

(Objected to as asking for hearsay.)

Ans. She had two large propellers aft. The vessel was submerged so that the after end was several feet lower than the forward, and so
that the draft of the vessel there should be greater than the
226 depth of the water in the channel. She was then backed up the
channel until she passed entirely across the bar. After having crossed the bar up stream, she passed down, bow foremost, and after getting across the bar, repeated the same operation. This method was substantially the same as that employed in using the excavating screw of the Essayons.

(Last paragraph objected to as irresponsive, and giving the opinion of the witness.)

Int. 83. How does this method compare with that employed in the Essayons.

(Objected to as asking for opinion of witness.)

Ans. It is substantially the same.

Int. 84. How does this method deepen the channel?

Ans. By the screw throwing the mud up into the strong current of the river, by which it is carried out across the bar.

Int. 85. Is there or not in this respect any difference between the plan and purpose of the use of the scrapers, Bishop's agitators, and the screws, either of the Enoch Train or the Essayons? Are they or not all intended to stir up the mud that the current may carry it off?

(Objected to as asking opinion of witness.)

Ans. There is one difference with respect to the scrapers used on the Essayons. They carry out with them each time as the vessel passes out across the bar a large amount of mud; they also serve as agitators,

by action of which mud is carried out by the current of the river in the same manner as that thrown up by the screws. All the other devices work in the same manner as the screws; that is to say, they depend upon the current of the river to carry off the mud thrown up.

Int. 86. Besides their use in the Enoch Train and Essayons, have or not water-tight compartments been elsewhere used for submerging; and, if so, when and where?

Ans. They are used in submerging dry docks—universally used. They are used in New York and New Orleans, the only places I know from my own observation.

(Objected to as irrelevant.)

Int. 87. Have they or not ever been so used in any of the public ships of this country; and, if so, when and where?

Ans. I don't know of any public vessel provided with them, before the Essayons was built.

227 Int. 88. Did you ever see any of the light-draft monitors built during the war?

Ans. Yes, sir.

Int. 89. Do you or not know whether or not they had water-tight compartments so built that these vessels could be raised and lowered in the water by filling these compartments or expelling water from them?

(Objected to as leading.)

Ans. I don't know of any one that was so arranged.

Int. 90. Did the Wiggins succeed in deepening the river? What became of Tyler's contract?

Ans. No, sir. She did not succeed. The contract was annulled. It was annulled in June, 1857.

Int. 91. What is the purpose and use of the mud-keel, so-called, in the Essayons, its shape, &c.?

Ans. It is to keep the bow of the vessel from shearing off when the screw was at work in the mud. The keel was six feet long and three feet deep; it was of a rectangle shape.

Int. 92. Did you ever see this device, or any drawing of it, or know of it, or any similar device, being exhibited or used in any vessel or plan of a vessel, except the Essayons?

Ans. No, sir.

Int. 93. Did you ever see any specification or description made by Brady, from which a ship-builder could make the dredge-boat shown in the drawings made on board the Wiggins, and which you saw in Baroone street?

(Objected to as asking for hearsay, and for the opinion of the witness.)

Ans. No, sir.

Int. 94. If a vessel were built with water-tanks, as represented in Brady's drawings, what would be the result, if they were filled?

(Objected to as asking for the opinion of the witness.)

Ans. If she were any ordinary vessel she would break in two. As shown in his drawings, the space occupied by the tanks is so great that the vessel would in all probability sink if the tanks were filled.

Int. 95. What is the position of the tanks shown in his drawing?

(Objected to as asking for secondary evidence.)

228 Ans. The largest tanks are at the extreme ends of the vessel and extending amidships above and beyond the engines. Their position was the same in all the drawings, so far as I recollect.

Int. 96. What is the position of the tanks in the Essayons and how does their size compare with that of those shown in Brady's drawing?

(Objected to as asking for secondary evidence and for the opinion of the witness.)

Ans. The tanks extend fore and aft from the 'midships section in the Essayons. The space occupied by them is relatively less than that occupied by the tanks as shown in the drawings made by Brady.

Cross-examination by counsel for complainant, not waiving objections heretofore made, and propounding questions as to such objective matters "de bene;" and counsel for complainant also objects to the exhibits offered, as inadmissible, as not being legally proved, and imperfect and partial.

Cross-int. 97. When were you 26 years old?

Ans. The 21st of September last.

Cross-int. 98. How long had you been in the Army of the United States prior to the four years mentioned in your first answer? In what capacity, and where?

Ans. I had been a cadet four years previously, at West Point.

Cross-int. 99. When did you first go to New Orleans; how long did you remain in New Orleans; and where did you stop in New Orleans?

Ans. In November, 1865, I first went. I remained there until the 8th of December, 1865, I think. I then went to Ship Island, and remained at Ship Island till September, 1866, when I returned to New Orleans, where I remained until September, 1867. I came to Boston after that, to New York first, and then to Boston. I remained in Boston until June, 1868. Then I again returned to New Orleans, where I remained until August, 1869. While in New Orleans, I had a room at 67 Dauphine street, and afterwards at 23 Rampart street.

Cross-int. 100. Where in New Orleans was the United States engineer office, in the autumn of 1866 and 1867, mentioned in your third answer?

Ans. At the Jackson Railroad building on Camp street.

Cross-int. 101. How far was that from the place where your room was at that time?

Ans. About a quarter of a mile.

229 Cross-int. 102. How far was it from the said United States engineer's office to the place where the Wiggins was operating when you was on board the Wiggins?

Ans. One hundred and ten miles.

Cross-int. 103. How often were you at said United States engineer's office during the time of the operations of the Wiggins?

Ans. I was there every day when I was in the city, except Sundays.

Cross-int. 104. How often was you in the city during that time, and how long did you remain each time?

Ans. I was in the city all the time I was not on board of the Wiggins, and I was on board of her at different times, altogether about a month.

Cross-int. 105. Where were you from the early part of June till the latter part of November, 1867?

Ans. I was in New Orleans from June until the early part of September, with the exception of such times when I was making inspections of fortifications about New Orleans. From the early part of September, until November, I was in New York and Boston.

Cross-int. 106. When and where did you see the printed letter referred to in your 23d answer, and who were present?

Ans. I saw the letter referred to at Mr. Lothrop's office, yesterday. No one was present but Mr. Lothrop.

Cross-int. 107. Did you at the same time see and examine the exhibits, which are referred to in your direct examination, and had you seen them previously?

Ans. I saw two of them, the third I did not see. I had not seen them before. I am mistaken. I saw the same ones in New York, at least what I took to be the same ones.

Cross-int. 108. When did you see them in New York and where, and by whom were they shown you?

Ans. They were shown me by Mr. Lothrop, at the Brevoort House, on the evening of the 27th of August, I think.

Cross-int. 109. Were you present in New York some weeks since at the taking of the depositions of Brady, Lamson, and others in this case?

Ans. I was there during a part of the time that Mr. Lamson was testifying and a part of the time of Mr. Brady's deposition.

230 Cross-int. 110. Did you hear Capt. Brady's testimony about your lettering his plans or sketches; and did you see the plans and sketches there produced?

(Objected to as not competent on cross-examination.)

Ans. Yes, sir; I did hear his testimony on that point. I saw some of the plans and sketches. I don't know that I saw all of them.

Cross-int. 111. From what place did you come to New York on that occasion? What distance? At whose request? How long did you remain in New York? By whom, and how much were you paid?

(Objected to as not competent on cross-examination; as immaterial and incompetent.)

Ans. I came from New Orleans upon an order from the chief engineer. I think the distance is about sixteen hundred miles. I don't know. I didn't go there at any body's request; I was ordered there. I received for mileage one hundred and forty-odd dollars. I was paid by the quartermaster, General Ingalls.

Cross-int. 112. Didn't you letter the drawing attached to the caveat sent by Brady to Washington? Did you not assist him in preparing that caveat?

Ans. I lettered a tracing for him; I don't know whether it was the one attached to the caveat or not. I did not assist him in preparing his caveat, to the best of my knowledge.

Cross-int. 113. Where did you see McAllister in New York, as stated in your 54th answer? Where did you stop in New York, and how long, and when was it you saw McAllester in New York?

Ans. I saw General McAllester at the office of the United States engineer agency, No. 7 Bowling Green. I stayed at the Hoffman House a portion of the time. I was there a part of the time at Governor's Island, and a part of the time at a house on Grove street. I have forgotten the number. I remained in New York until the 17th of October. I used to see him nearly every day at the engineer agency, during the time I was in New York, except during about ten days of that time when he was away on leave of absence.

Cross-int. 114. At what time did you arrive at New York? When did you first see Gen. McAllester in New York?

Ans. I arrived in New York on the 9th of September, I think, and I don't think I saw Gen. McAllester for one or two days after that.

231 Cross-int. 115. Is that the time alluded to in your 54th answer?

Ans. I don't recollect whether that was the time or not; whether that was as soon as I arrived there or not, or the first time I saw him.

Cross-int. 116. Is the time to which you allude in your 54th answer some time between your arrival in New York in September, as before stated, and the time you left, the 17th of October?

Ans. Yes, sir.

Cross-int. 117. Was you ever on board the Enoch Train spoken of in your direct examination?

Ans. No, sir.

Cross-int. 118. Did you ever see the said Enoch Train?

Ans. No, sir.

Cross-int. 119. What drawings do you allude to in your 95th answer?

Ans. To the drawings made by Mr. Brady, which I saw on the Wiggins, and at his room at Baroone street.

Cross-int. 120. When did you arrive with the dredge-boat built at the Atlantic Works at Pass à l'Outre? State fully the operations, and their extent, of said dredge-boat.

(Objected to as asking for new matter, not competent on cross-examination.)

Ans. She went to Pass à l'Outre some time in September; I can't give the date exactly. She remained there off and on, at work in the channel until the 18th of June, 1869, except during that portion of time when she was at New Orleans, or some other point between there and the mouth of the river, having repairs made to her, or getting supplies. From June until the 14th of August she was at New Orleans undergoing repairs. When she first went to Pass à l'Outre, the depth of the water in the channel, at the lowest point, was eleven feet six inches. This depth she increased, during the time she was at work, to fourteen, to fifteen, and finally to seventeen feet eight inches, when she was obliged to leave the mouth of the river and go to New Orleans for repairs. The channel which she had opened was filled up during her absence, and she was obliged to open the channel anew each time upon her return from repairs. Her operations were suspended in June, and then there was a depth of water of seventeen feet four inches.

232 Cross-int. 121. When and where did you ever see such compartments in any dry dock, as described in your 86th answer?

Ans. I have seen docks of that kind on East River, in New York, some of them just above the Novelty Works.

D. W. PAYNE.

Deposition of Oliver Edwards.

Direct examination by counsel for defendant:

Int. 1. Please state your name, age, residence, and occupation, and how long you have followed the same.

Ans. Oliver Edwards; age, 57 years; live at Brookline, Mass.; occupation, manufacturer of machinery; at present I am out of health, and not in business; have followed the business about forty years.

Int. 2. You are president of the Atlantic Works, are you not? And how long have you been so?

Ans. I am; and have been president since 1854; I think that is the date. I am not positive about the date.

Int. 3. Did the Atlantic Works build the dredge-boat Essayons, and, if so, for whom? State the circumstances; who furnished the plans, specifications, and detailed drawings; who superintended the construction, and generally, in detail, how you came to build her, and all about it, as nearly as you can recollect.

Ans. We did build her under a contract with the government, through

the War Department. The government advertised in the usual way, through the papers, for proposals; the general plans and specifications to be examined at the engineer's office in New York. The person in charge of the office, so far as I know, was General McAllester, the person I saw and consulted with. I went to New York in company with our engineer. We were shown the drawings and specifications by General McAllester; and from these we made up our price, and submitted a proposal, which was accepted. The contract was then executed and signed there, and Lieutenant Payne, of the Engineer Corps of the Army, was detailed as superintending engineer to superintend the construction and execution of the work. All the plans and detailed drawings were to be furnished us by the government. What we were to do was to execute the work according to plans and drawings furnished us; we had nothing to do with originating the work. We saw the plans in process in New York; they seemed to be preparing the detailed drawings while we were in New York.

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Int. 4. If any change in the details became necessary in the process of construction, what did you do about it? Had you any power or authority to make it?

Ans. We had no authority to make any changes of any kind. All changes that were made or became necessary to make, were referred to General McAllester for his approval.

Int. 5. Had you any voice in or control of the plans or specifications, or did you simply build a specific thing according to specific directions given by the government?

Ans. We had no voice in or control of the plans. Our contract required us to build strictly according to the plans furnished us by the government; that is the only safe way to work for the government; we should not dare to vary from the plans, even if they were wrong.

Int. 6. The government furnished the plans and specifications, you say; did you do anything but furnish labor and materials according to these plans and specifications?

Ans. That was all.

Int. 7. Had you anything to do with the result? were you responsible for that?

Ans. Only for the quality of the materials and the workmanship.

Int. 8. By whom was the work superintended, and under whose direction was it carried on?

Ans. Lieut. Payne, who had been detailed by the government to look after its execution, and who went to New Orleans with it after its completion.

Int. 9. You have already testified this vessel was built for the War Department; had the War Department any shops or yards of its own, or any facilities or means for constructing such a work?

(Objected to as immaterial.)

Ans. I don't know of any; I never heard of any.

Int. 10. How could the War Department construct such a work?

(Objected to as immaterial.)

Ans. I know no way it could do it except as it did, by contract.

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Int. 11. Were you the superintendent of your own shops at the time this work was going on there?

Ans. I was not.

Int. 12. You received the plans, you say, from the government. What did you do with them—keep them or return them?

Ans. We did receive them; and after completing the work they

were returned, I suppose. We are required to do so as a custom. But I don't know of my own knowledge that they were returned.

Int. 13. What became of your contract with the government?

Ans. After signing the contract it is left with government or its agent, whoever he may be. They never sign a contract; it is only signed by us.

Int. 14. Did you build any light-draft monitors for the government during the war; and if so, when?

(Objected to as immaterial.)

Ans. We built two monitors. The first one was in the early part of the war. I can't give you the date here. It was the Nantucket. The Casco, the other one, was not completed when the war closed. I should say the Casco was completed before the close of the war, but I can't give the date.

Int. 15. Had these light-draft monitors any means by which they could be raised out of the water, or sunk; and if so, what?

(Objected to as inadmissible.)

Ans. The Casco was built double, leaving a water-space on each side nearly the entire length of the vessel, with an arrangement of valves for flooding the compartments at pleasure, for the purpose of sinking the vessel to the desired draft of water, and with powerful steam pumps to pump the water out for the purpose of raising it in the water. The compartment on the side was divided into several, and one or all of them could be filled as desired. The object was to enable them to put her on an even keel, or to raise or depress one end at pleasure. The Nantucket was not so constructed.

Int. 16. Do you know of any other vessel constructed on the principle of the Casco?

(Objected to.)

Ans. There were others. I know of my own knowledge or observation of only four or five. I have reason to believe there were
235 some sixteen. They were light-draft monitors of the same class as the Casco.

Int. 17. Who furnished the drawings for the Casco?

Ans. The Navy Department, through their chief engineer, Stimers.

Int. 18. Were these detailed and specific drawings?

Ans. They were. They furnished what are called the working plans. We had only to trace them and put them into the shops for the workmen.

Int. 19. So far as the use of water-tight compartments in a vessel for the purpose of sinking her, and of sinking her on an even keel if desired, is concerned, do you know of any difference in principle between the Casco and Essayons?

Ans. I should say they were the same. I see no difference.

Int. 20. Wasn't a steam-pump used both in the Casco and Essayons to exhaust the water in these compartments?

(Objected to and withdrawn.)

Int. 21. Please state whether or not a steam-pump was used both in the Casco and the Essayons to exhaust the water in these compartments.

(Objected to as leading.)

Ans. Yes, there was.

Int. 22. How was the water exhausted from these compartments in the Casco, and how in the Essayons? Was there any difference of principle between them?

Ans. It was exhausted from both of them by means of a steam pump or pumps. I know of no difference in principle. The pumps were of different construction, to accommodate the space they occupied.

Int. 23. Had the Casco screws at both ends? Was she what they call a double-ender, or had she a screw only at one end?

Ans. She was not a double-ender; she had a screw at the stern only.

Int. 24. Do you know of any double-ender propellers being built during the war?

Ans. I do not.

Cross-examination by counsel for complainant:

Cross-int. 25. During the progress of the work on the Essayons,
236 did you in fact suggest changes or alterations from time to time, which were adopted by the government?

Ans. Personally, of my own knowledge, I know of no alterations that were made. I knew of correspondence with General McAllester on the subject of alterations from time to time, but I don't know who suggested them.

Cross-int. 26. Does your company, the Atlantic Works, employ counsel or incur expenses in defence of this suit, or is the defence assumed by the government?

(Objected to as incompetent.)

Ans. The defence is assumed by the government.

OLIVER EDWARDS.

Deposition of Charles Nickerson.

Direct examination by counsel for defendant:

Int. 1. State your name, age, residence, and occupation, and how long you have followed the same.

Ans. Charles Nickerson; my age is thirty-two years; I live in Boston, in that part formerly Dorchester, near the sixteenth ward; my occupation is that of clerk, and has been such for six years; am clerk for J. Henry Sears & Co., who are agents for the Merchants' Boston and New Orleans Steamship Company.

Int. 2. Please state whether or not the steamship St. Louis was ever employed in this line; and if so, during what period, and who commanded her.

Ans. She was employed in this line, I should say, from 1866 to 1870; commanded by Capt. Claussen, and afterwards by Capt. Babson.

Int. 3. During what period did Capt. Claussen command her, and when and why did he leave her?

Ans. Capt. Claussen commanded when she first went out upon the line, and till the date of his death. He died November 17, 1867, at sea.

Int. 4. Where did Capt. Claussen live?

Ans. Somerville, I think; or near Somerville, or Cambridge.

237 Int. 5. Had you ever a Capt. Crossman in command of the Saint Louis, or of any other ship having connection with your line?

Ans. No, sir; his name was F. F. Claussen. I don't know what the initials stand for.

(No cross-interrogatories were proposed by counsel for complainant.)

CHARLES NICKERSON.

Deposition of John Roy.

Direct examination by counsel for defendant:

Int. 1. What is your present business, and how long have you been so engaged?

Ans. My present business is that of civil engineer, architect, and builder. I have been so engaged for forty-one years last past.

Int. 2. Please to state whether you are not familiar with the construction and working of machinery for vessels propelled by steam, and with machinery operated by steam generally; and, if so, how familiar, and what have been your means of acquiring a knowledge of such machinery, and of machinery generally.

Ans. I am familiar with machinery for vessels propelled by steam, and the construction thereof; and I am familiar with machinery operated by steam generally. I have designed and superintended the construction of the machinery of several steamers, and the steamboats themselves. This has been the study of my life; the first practical operation in which I was engaged was in 1835, in the erection of a low-pressure engine in Dundee, Scotland. I came to New Orleans in 1842, and have since devoted myself entirely to my profession hereinbefore described, and have, as I have before stated, designed and constructed several steam vessels of different descriptions. In 1865 I was in charge of all the machine-shops on the New Orleans, Jackson and Great Northern Railroad, and left there to go into the foundry business.

Int. 3. What was your business in 1866, and what was the firm-name, if any, under which you were transacting business?

Ans. In 1866 my business was foundry business, and the firm was Armstrong & Co., composed of John Armstrong and myself.

238 Int. 4. Please to state whether the firm of Armstrong & Co. contracted to fit up the boat called the Wiggin, or Wiggins Ferry, with machinery for dredging; and, if so, when the contract was made, as *as* nearly as you can state, and whether the work was done by said firm; and, if so, under whose supervision.

Ans. Yes; the firm of Armstrong & Co. did so contract; the contract was made in the autumn of 1866; the work was done by said firm, under my supervision.

Int. 5. When did the work of fitting up begin; when end; where was it done, and in what did it consist?

Ans. The work of fitting up commenced some time in the month of November, 1866, and was finished on the 18th day of March, 1867; the work was done at the levee, in New Orleans, opposite Errato street; our foundry was at the corner of Errato and New Levee streets; the work consisted in putting or applying to the Wiggin two large conical screws, a large frame-work connecting the same with two steam engines, one driving each screw, and strengthening the hull of the boat forward.

Int. 6. With whom was this contract made by said firm, and what persons were interested in or connected with this enterprise, so far as you know, in any way? Name all the persons.

Ans. Said contract was made with Mr. Tyler—Mr. Horace Tyler—and, to the best of my recollection, Mr. William Creevy and Mr. E. L. Brady were interested therein. I cannot say positively, but the contract will show whether all of the above-named parties signed it.

Int. 7. Was said contract in writing; and, if so, will you please to produce the same to the commissioner now taking your deposition, that he may annex a copy thereof to your deposition?

Ans. Said contract was in writing, and I will endeavor to procure a copy thereof; I have no copy thereof, but I think the other parties have.

Int. 8. Please to state who the E. L. Brady is whom you have mentioned as being a party interested in the Wiggin, or in the dredging.

Ans. He was master of the Wiggins Ferry.

Int. 9. Is he the same person who afterwards obtained a patent for a dredge-boat, and who is plaintiff in the present suit?

239 Ans. I believe him to be the same person.

Int. 10. You say he was master of the boat; state what he did about the boat, and how he was engaged and occupied during the time she was fitting up, as you have before stated. How often did you see him, if at all, during this time?

Ans. He was in charge of the boat and everything on her; he had two men there, sailors, while she was fitting up, and, I believe, a cook part of the time; and he boarded on the boat while the cook was there; he was there every day, I think; I don't recollect ever missing him a day. He was there inspecting the work for the company. I mean Tyler and others interested in the undertaking, and watching and attending for their interests. He often brought visitors there to see the work. He generally came about eight o'clock in the morning, sometimes earlier, and he wouldn't go away until the men quit at night; this was his habit.

Int. 11. If I understand you, you were in charge of the construction of the machinery of the boat?

Ans. Yes. I designed and superintended the construction of the machinery for fitting and applying the screws, or cones; that is all the machinery of the boat; the cones themselves were made in our foundry, of which my partner had charge.

Int. 12. What cones were used, and according to whose principle, or patent, were they made?

Ans. They were Bishop's patent conical screws, made according to E. B. Bishop's patent; said Bishop is a resident of New Orleans.

Int. 13. How much of your time was spent in the superintendence of the fitting up of this boat?

Ans. I was there, generally, from seven o'clock in the morning until sundown, except when I went to the foundry, two blocks away, to give orders for such things as I required.

Int. 14. Whether or not Mr. Brady and yourself conferred together, frequently or otherwise, as to the best things to be done for the working of the boat, or the best designs to be adopted, or as to details?

Ans. The working plans were first made by me, and submitted to Mr. Brady, and approved by him, and we worked to the plans; there was very little alteration afterwards; the studying was done beforehand; but we talked and conferred freely together on all points while the work was going on.

240 Int. 15. Then, if I understand you, Mr. Tyler and his associates, of whom Mr. Brady was one, employed your firm to fit up the Wiggins for dredging the mouth of the Mississippi; she was to be fitted with Bishop's cones, or screws; the working machinery and apparatus for applying the motive power was designed by you, and approved by Brady; the work of fitting up was done under your superintendence; Brady was in charge of the whole matter; both Brady and yourself were constantly on the boat attending to this; and the work of fitting up and getting ready occupied from some time in the month of November until after the middle of March; is this so?

Ans. Yes, it is.

Int. 16. Whether or not, during this time, you ever heard any suggestion or statement from Mr. Brady that he had a peculiar scheme of his own for dredging or excavating, or that he had invented another or different method, or that he thought of applying for a patent for a pro-

cess, or for machinery, of his own, for dredging, or that there was any such plan, or idea, or method of his own which was preferable to or better than the one there employed, or which might be used instead of it, or anything of this nature, or of like substance or import; or did he show you any design, sketch, plan, or drawing of any such invention or idea of his own, or intimate that he had any?

Ans. No.

Int. 17. Whether or not you remember an occurrence or conversation with Brady on the occasion of your getting up steam on the Wiggins? If yea, please to state all that took place, and the time, as nearly as you can, and how, if at all, you are able to fix the time; and state the conversation as fully as you are able.

Ans. I do remember such an occurrence and conversation. Mr. Brady came up early that morning and told me to get up steam, as he had invited several distinguished persons to see the machinery work that day. The steam was got up, the visitors came and saw the working of the machinery. My partner came up to the boat and stated to me that he had heard down town that we had tried the boat that day (this was in the evening, after 3 o'clock p. m., that he said this), and he wanted to know why I got up steam without his orders. I told him that Mr. Brady ordered me to get up steam; he then cursed both me and Mr. Brady, and went up into the cabin to see Brady, where high
241 words pas-ed between them. Brady came down-stairs after Mr. Armstrong left, very much excited, and told me that John Armstrong might keep his boat; that he could go across the river and get a propeller, and load her down aft, like they did on the bar before the war, with the Enoch Train. I fix the time of the above conversation at or about the 12th of March, 1867, because the machinery was in working order, and we left for the bar on the 19th March; and my memory serves me that this occurrence took place about a week before.

Int. 18. You state that the Wiggins left for the bar on the 19th of March, 1867; state whether or not you mean the bar at the mouth of the Mississippi River, where the excavating was to be done, and how you fix the time.

Ans. I do mean the bar at the Southwest Pass, at the mouth of the Mississippi River. I fix the time from the fact that I made an entry of the fact of the boat's leaving there, at the time, in my diary.

Int. 19. Referring to your diary for the purpose of refreshing your recollection, are you able to state the date?

Ans. I am. I should recollect it from business transactions that took place at the time; but referring to my diary confirms it in my mind.

Int. 20. Whether or not you went down with the Wiggins to the bar, how long you stayed, what your duties were, and what you did on board?

Ans. I went down with the Wiggins to the bar; I returned to New Orleans on the 10th of April following; my duties there were to see that the machinery performed the work contracted for (I mean the work contracted for by Armstrong & Co.), and instruct the men in the manipulation of the machinery; and I attended to those duties.

Int. 21. Who was on the boat, and in what capacities?

Ans. I was there representing Armstrong & Co.; Gen. McAllester and Lieut. Payne were there representing the United States Government, and Capt. Brady representing the contractors, together with the boat's officers and crew.

Int. 22. When did the vessel commence operations, and how continuously were they kept up, if at all?

Ans. We commenced operations in the pass, not on the bar, on the 23d of March, and worked there for several hours, very successfully. We afterwards broke some of the machinery, and repaired it, and tried the vessel at various places on the bar; and when I left it was in good working order.

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Int. 23. How long did General McAllester remain on board, if you know?

Ans. I think he left on the 25th of March. I did not make a note of it, but know that this is the fact, from the fact that I went on the steam launch that day with Lieut. Payne; and General McAllester was gone when I returned.

Int. 24. Whether or not, at any time, while at the bar, Brady, to your knowledge, made any sketch or plan of machinery for dredging, or of a dredge-boat; and, if so, when?

Ans. Yes; between the 25th of March and 10th of April, 1867; he made the plan of a propeller, with long conical screws for dredging.

Int. 25. How do you fix the time?

Ans. Because I know it had not been commenced when General McAllester left on the 25th, and it was finished when Lieut. Payne and myself left on the 10th of April.

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Int. 26. Please describe the sketch referred to in your last answers.

Ans. The vessel shown in the sketch was similar to a common ship propeller for giving a ship motion through the water. The dredging machinery was placed, on the sketch, at the end of the vessel opposite the screw, and consisted of two long cones, parallel with each other, with blades upon them at intervals, similar to Bishop's cones, except that the blades on Bishop's were continuous, instead of at intervals; and the whole vessel was arranged with water-tanks to give her the necessary draft for working the conical screws on the bottom. Bishop's cones, as applied to the Wiggin, were set upon an angle instead of being parallel.

Int. 27. Whether or not you had any conversation with Brady about this sketch, or were present at any conversation had by him with any other person about the same? If so, please state said conversation or conversations as fully as you are able.

Ans. During the whole of the time while Mr. Brady was preparing the sketch Lieut. Payne and myself were constantly with him—that is, constantly on the ship with him—and the subject of the sketch was a common subject for discussion between Mr. Brady, Lieut. Payne, and myself. Lieut. Payne and I ridiculed the idea of Mr. Brady to patent another man's invention; but his answer was that he could get it patented.

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Int. 28. Whether or not you ever saw this sketch or one similar to it, elsewhere, subsequently; and if so, when and where?

Ans. Yes, some time afterwards—about a month after—I saw what appeared to me to be the same sketch, exhibited in the office of Mr. Creevy, merchant, in New Orleans—the office of the Star Line of steamships—New York Mail Steamship Company; the same Mr. Creevy whom I have before spoken of.

Int. 29. How were the cones in the sketch referred to in your last answer?

Ans. The same as in the sketch made by Mr. Brady at the bar, and

I think the sketch was the same one; it was marked with Brady's name.

Int. 30. Whether or not, afterwards at any time, you saw another and different sketch made by Brady; and if so, state when and where, and how it differed from the one you have already described.

Ans. Some time afterwards my attention was again called to a different sketch in Mr. Creevy's office, purporting to have been made by Brady, and I examined it closely and found that it was altered from the original conical screws, and a ship's propeller substituted, for the purpose of excavating. In other respects it was the same, and I believe it to be the same drawing, which I first saw, but now altered.

Int. 31. Whether or not, between the time when you saw the sketch first in Mr. Creevy's office, and the time when you saw it there again, altered as you state, Mr. Brady had any interviews or conversations with Gen. McAllester to your knowledge; and if so, how do you know, and were you present at the same?

Ans. Within a day or two after Mr. Brady came up from the bar, I saw him in Gen. McAllester's office, and he went into the general's private office, and had a conversation with the general; what passed I know not; but some time after this, I met Brady in the street, who told me that he had had a conversation with the general about the bar excavations, and that the general was going to recommend his (Brady's) plan to the government for adoption; this conversation between General McAllester and Brady, when I saw Brady at the general's
244 office, was before I saw the altered sketch in Mr. Creevy's office, and I was very much astonished, after what Brady had told me, to find the sketch altered. Whether the conversation between the general and Brady was after the time when I saw the sketch first in Mr. Creevy's office, I cannot say; it was about that time; it might have been the same day.

Int. 32. Please to state whether or not you are familiar with the subject of dredging; and if so, what attention you have given this subject further than is already stated in this deposition. Are you a member of the New Orleans Academy of Sciences? And if so, have you given this subject any attention as such member?

Ans. I have given the subject of dredging a good deal of study, and am familiar with most of the appliances for that purpose which have been used. As an assistant to Maj. Beauregard, while in charge of the works at the mouth of the river before 1858, I had considerable experience in this matter. I am a member of the New Orleans Academy of Sciences, and as such I have made inspections on the bar, and of the various operations of the dredging, and the appliances therefor.

Int. 33. Please to state whether you are familiar with the operations of the Enoch Train on the bar of the Southwest Pass in 1859, or elsewhere in this vicinity, about that time; and whether you are familiar with the operations of the Essayons, now at work at the passes, and with the construction and operation of the machinery and devices for dredging on the above-named boats respectively.

Ans. I saw the Enoch Train working in the harbor of New Orleans in 1860; she was dredging the harbor opposite Canal street, and I was on board the Essayons then at work at Pass à l'Outre bar in 1869, and was familiar with the operations of both ships. I went down to the Essayons as chairman of a committee from the New Orleans Academy of Sciences, to inspect her operations, and report thereon, during which time I had ample opportunity to familiarize myself with the construction and operation of her machinery.

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Int. 34. Please to compare the mode of operation, and the principle carried out in dredging in the Enoch Train and the Essayons, and the dredging machinery and appliances of the two, and state
245 whether or not, in your opinion as an expert, the one is for substance different from, or the same as the other in principle; and, if different, how different?

Ans. So far as the dredging principle applied in each vessel is concerned, it is identical; but the Essayons had a rake in addition to the machinery used in the Enoch Train.

Int. 35. Please to look at the exhibit now produced to you, and marked "Exhibit A, A. B. L., commissioner" (which exhibit is hereto annexed), and state whether the screw or cones represented upon said sketch are similar to or different from those drawn by Brady in the first sketch made on the Enoch Train at the bar, concerning which you have before testified. Compare them.

Ans. The representation of the screws as drawn in this sketch (Exhibit A) is similar to those shown upon the first sketch of Brady's and their position the same; I refer to the cones shown at 1 and 2 (A. B. L., commissioner) upon the aforesaid sketch marked "Exhibit A," and attached to the sections of the hull shown upon said exhibit, and not to the sketches shown at 3 (A. B. L., commissioner) on said Exhibit A, which I do not remember. I am positive that the first time that I ever heard about using a ship's propeller instead of the conical screws sketched by Brady, was from Gen. McAllester; and I have no recollection whatever of seeing the statements written above and below 3 (A. B. L., commissioner) upon Exhibit A, on the sketch made by Brady at the bar.

Int. 36. During the *the* time you were fitting up the Wiggins, as before stated, or at any other time, whether or not you ever heard Mr. Brady make any statements as to the way he thought she would work, or the probable success of the enterprise, or its failure, or otherwise.

Ans. Certainly; he expressed the utmost confidence in her, and proved it by investing his reputation as an engineer, and his money. He said he thought it was the best thing out. I recollect going into a calculation with him one day as to her capability of turning up the mud, and Mr. Brady expressed himself as perfectly satisfied that she would accomplish the result shown by our calculation, which was entirely satisfactory to him.

Int. 37. Whether or not, up to the time when Brady made the sketch at the bar, after General McAllester had left, as you have stated,
246 you ever heard from Brady that he had any plan, scheme, or idea for dredging of his own, different from that carried out on the Wiggin, or any intimation of any other plan whatever, except what he said about getting a boat like the Enoch Train, as you have before stated.

Ans. No.

Int. 38. Whether or not Mr. Brady, at any time, if you recollect, in any conversation, made any statement as to Bishop's mode of dredging as compared with other modes.

Ans. I can't settle down upon any particular conversation, but I have often heard him say that Bishop's method (that is, the method used on the Wiggins) was the best that he knew of; and, in fact, he wanted me to patent the arrangements for working it, and I declined to do it.

Int. 39. What did he say about your patenting it?

Ans. Many a time he talked about it, and wanted me to do it. He wanted me to do it, but I declined; he said I could do it.

Cross-examination by counsel for complainant:

Cross-int. 40. Where have you resided during the last ten years, and what has been your business during that time?

Ans. New Orleans has been my residence during the last ten years; in 1862 I went out into the Confederacy, and returned after the surrender; in March, 1860, I was constructing architect of the new custom-house in New Orleans, and I remained so until I was discharged, when this State went out of the Union, by the Confederate officers, in 1861. During 1861, and until I went out into the Confederacy in 1862, I superintended the manufacture of ordnance at the new custom-house and elsewhere in this city. During my absence in the Confederacy I was superintendent of ordnance in the navy, at various points, but more especially at Shreveport, Louisiana. I came back to this city in 1865, a paroled prisoner, and soon went into the employ of the New Orleans, Jackson and Great Northern Railroad, and there I remained until 1866; then I went into the foundry business with John Armstrong, and there remained until April, 1867, and then I went into the employ of the United States Government, in the light-house department, and there remained about a year, and since my leaving the last-named service, I have been employed in my profession in this city.

247 Cross-int. 41. Were you not an outdoor manager of the foundry that fitted up the Wiggins?

Ans. Yes.

Cross-int. 42. Before the last civil war, or rebellion, were you not a stone and brick mason at New Orleans?

Ans. As a part of my profession, I superintended the laying of stone and brick, and sometimes laid them myself.

Cross-int. 43. After said war commenced, did you not enter the rebel army? Did you not build gun-carriages in New Orleans for the rebels? How long did you continue in the rebel army?

(This interrogatory, and all parts thereof, objected to by solicitor for defendant, as irrelevant and otherwise incompetent.)

Ans. I never was in the rebel army, except as ordnance officer, as I have mentioned above in my answer to first cross-interrogatory. I held a commission as captain of artillery in the service of the State of Louisiana, during the whole existence of the war. I acted as captain of artillery, until 1862; my company was a company of workmen and drilled at night. These men were employed during the day, under my supervision, in building gun-carriages for the confederacy; I continued in the service of the confederacy until I returned to this city with my parole, as I have stated above in my answer to first cross-interrogatory.

Cross-int. 44. After the war, did you not take charge of Armstrong's foundry; and for how long a time?

Ans. Yes; about one year, 1866 and 1867.

Cross-int. 45. Was not your house or other property confiscated, or seized by Gen. Butler; and did said McAllester aid you in having it restored to your wife?

(This interrogatory, and all parts thereof, objected to by solicitor for defendant, as irrelevant and otherwise incompetent.)

Ans. My house and other property was seized, at some time during the war, after 1862 and before 1865; but I cannot tell whether that seizure was made by Gen. Butler or not. My property was proceeded against for confiscation in the United States court here, and it was con-

demned by default; after my return, Judge Durell, of the United States court here, opened the judgment and decreed that my property should be returned to my wife under the homestead law of this State of 1852, of which she had taken advantage long before the war;
248 the United States district attorney appealed from that decree to Washington, which appeal, I suppose, is now pending. This decree of Judge Durell, in favor of my wife, took place at least one year before I knew Gen. McAllester, and I have no recollection of having spoken to Gen. McAllester, on the subject at all, and I can and do state, most positively, that Gen. McAllester never did aid me in having my property restored to my wife.

JOHN ROY.

Deposition of John Armstrong.

Taken, de bene esse, March 28, 1860, at New Orleans, in the district of Louisiana, in behalf of the defendant, the said witness living at a greater distance from the place of trial than one hundred miles, neither the adverse party or his attorney being within one hundred miles of said New Orleans, before Charles S. Rice, U. S. commissioner.

Direct examination by counsel for defendant:

My full name is John Armstrong. I reside in the city of New Orleans. I am fifty-five years old and upwards. I am proprietor of Armstrong's foundry in New Orleans. Have been such proprietor and in the foundry business on my own account, in New Orleans, about thirty years.

Int. 1. State whether or not the Wiggins' ferry-boat was fitted up as a dredge-boat at your foundry, in 1866 and '67.

Ans. Yes. It was.

Int. 2. Please to state when such work began, and when it ended, as near as you can tell.

Ans. It took about four or five months; may be longer; beginning, I think, in the fall of 1866.

Int. 3. State whether or not you were interested in the dredging operations at the bar at Southwest Pass performed by the Wiggins.

Ans. Not at the first, when the contract was made. Afterwards, I came into it as a partner.

Int. 4. State whether or not you saw Mr. Brady while the Wiggins' ferry-boat was fitting up; and if so, how often.

Ans. I saw him every day, almost.

249 Int. 5. State whether or not you had conversation with him about the matter of fitting her up; and, if so, how frequently. How much did you talk the matter over with him?

Ans. We talked about it as he was going as captain of the boat.

Int. 6. State whether or not you ever heard him say, before that boat went down to the bar, that he had any different scheme or peculiar scheme of his own, for dredging, or for a dredge-boat. State, also, whether or not he ever showed you any plan, or stated that he had any for any such scheme or boat, or in any way intimated to you that he had any different or peculiar plan from that carried out on the Wiggins Ferry.

Ans. No; he never intimated to me in any way that he had any such plan, or showed me any such sketch or drawing,

Int. 7. Please to state whether or not, at any time, after the time in-

quired about in the preceding interrogatories, you saw any sketches or plans made by Mr. Brady, or purporting so to be, of a dredge-boat; if so, when, where, and describe the same; and if you had any conversation with said Brady about them, please state it.

Ans. I did see a drawing in Mr. Creevy's office. I do not know who made it. I was told that Mr. Brady made it. As to the conversation, Mr. Brady asked me what I thought of it, the plan. I told him I thought it was Bishop's plan, only applied in a different way; that is, the ship was built to fit the plan. The screw was in the bottom of the boat, upon a fixed shaft, the vessel to be raised and lowered.

JOHN ARMSTRONG.

Deposition of John Blackadder.

Taken, de bene esse, March 28, 1870, at New Orleans, in the district of Louisiana, in behalf of the defendant, the said witness living at a greater distance from the place of trial than one hundred miles, neither the adverse party or his attorney being within one hundred miles of said New Orleans, before Alanson B. Long, U. S. commissioner.

Direct examination by counsel for defendant:

My name is John Blackadder; my residence is New Orleans, Louisiana; my occupation is machinist; my age is forty-five years, 250 and past; I am the foreman in Mr. John Armstrong's foundry, in New Orleans, and have been foreman in the establishment since October, 1867. I first went into Armstrong's foundry in May, 1866. The firm was then Armstrong & Co. I was foreman in the work of fitting up the Wiggins Ferry, which work was commenced some time in the fall of 1866, and lasted until March, 1867. I was at the Wiggins Ferry, as foreman every day; Mr. Roy had charge of the work of fitting up as superintendent, and I was foreman under him. We left for the bar in the Wiggins Ferry about the 18th or 19th of March, 1867. I went down as engineer in charge of the machinery, and remained on board, in charge of the machinery, I should say about four months; I remained after Brady left for some time. Brady was in charge as captain until some time in June. During the time the Wiggins Ferry was fitting up, I saw Brady nearly every day, and sometimes two or three times a day. He was always very familiar; he stayed at the boat during the latter part of the time the boat was fitting up, nearly all day, taking his meals there. During the time that we were fitting up the Wiggins Ferry, I never saw Mr. Brady have any sketches or plans of any other or different scheme for dredging, and never saw him at work upon any drawings or plans, or speak of any, and I never heard him refer to any plan of his own for dredging, or say anything about it, or intimate that he had any. About the time the boat was completed we got up steam; Mr. Armstrong was vexed about having steam without his knowledge, and words passed between him and Mr. Brady, and afterwards Brady complained to Mr. Roy; I didn't hear much of the conversation, but it was about Armstrong's manner to him (Brady), and I heard him say that Mr. Armstrong could keep his boat; that he could get another.

Gen. McAllester went down to the bar with us, and remained with us about a week. I do not remember seeing any plans or drawings made by Brady while Gen. McAllester was there. After he left I saw Brady at work upon plans of a dredge-boat with an unadjustable screw fixed in the boat; the boat to be sunk; these plans were in his room;

he used to be in his room a good deal at that time, and I used to go in his room and look at them; sometimes he called me in, and sometimes I went in on other business. I saw a good many sketches which he was making then. Sometimes he talked with me as to how it was best to do this and that in the plans, and he was frequently talking
251 with Mr. Roy and Lieut. Payne about it. Lieut. Payne did considerable of the drawing, I think.

I have no recollection of hearing Brady say that this was an old thing with him, or had been previously thought of by him; but from what I heard him say, and from what I saw of the plans, my impression was that it was a new plan at the time. I am sure that he said, on one or two occasions, that this would supersede Bishop's plan altogether, and he spoke of it as something which he was then getting up.

JOHN BLACKADDER.

Deposition of Thomas G. Mackie.

Direct examination by counsel for defendant:

Int. 1. Please state your name, age, residence, and occupation.

Ans. My name is Thomas G. Mackie; my age is fifty-two years and upwards; my residence is Algiers, parish of Orleans, Louisiana; my occupation at the present time is that of manager of the Ocean Dry Dock lying at Algiers.

Int. 2. Were you a member of the late firm of Hyde & Mackie, of Algiers, Louisiana; and if so, during what period?

Ans. I was a member of said firm from 1847 to 1862.

Int. 3. Do you know about a contract made on or about the 24th March, 1859, between the United States and Charles H. Hyde, for excavating the mouth of the Mississippi River, and were you and your partner, William A. Hyde, sureties for Charles H. Hyde's performance of that contract?

Ans. I do not know about such a contract, and we, my partner and myself, were such sureties.

Int. 4. State by whom such contract was carried out and executed; if at all.

Ans. By Hyde & Mackie; that is, by William A. Hyde and myself.

Int. 5. Please to state what was done by Mr. William A. Hyde and yourself in the execution of this contract; please to state fully and in detail; state also the condition of the Mississippi River at the mouth, at the passes, at the time, and under what circumstances the work was undertaken.

252 Ans. The Mississippi River at its mouth, at the passes, was very much clogged at the time this contract was entered into, which completely blockaded vessels, as you might say; there was but fourteen feet of water on the bar at the Southwest Pass at mean tide, at the time, and less water on the bars at the other passes or mouths of the Mississippi River; we went to work with great rapidity. First I went to Mobile and purchased the side-wheel steamer, the P. F. Kimball, brought her to Algiers, and fitted her up. She was fitted up with buckets worked by steam at her bows; it took about a month to fit her up. There was no time lost in fitting her up. We sent her right down to the bar to work excavating; I went down on her and started her at work; after I had been there a short time I returned to this city, leaving competent parties in charge of the Kimball. Mr. Kimball, who had been formerly concerned with Craig & Righter, previous contractors for clearing the bar at the pass, was to be interested with us also in

the work under this contract. We needed another vessel, and we talked over the matter of procuring one—Mr. Hyde, Mr. Kimball, and myself—and the best way of operating her. Mr. Kimball suggested getting a propeller, and using her screw for cutting up the mud of the bar, as the most expedient way of deepening it. We were limited to time by our contract, and we saw how time was slipping, and we weren't accomplishing it fast enough. We talked over the matter of the propeller, and agreed that would be the best thing; therefore we sent Mr. Kimball on to the North to see if he could purchase a propeller adapted for the purpose. Mr. Kimball left immediately for the North. I received a dispatch from him after he arrived at New York, saying that he could buy the propeller America, but the price was too much. He went on to Boston, and from there telegraphed me that he could buy the Enoch Train. I knew about the Enoch Train, having seen her previously in Boston, and we directed him to close the bargain for her purchase. Mr. Kimball therefore purchased her, the Enoch Train, and brought her out here. Soon after Mr. Kimball purchased the Enoch Train, and before she got out here, I left for the North, and spent the entire summer there, returning in October. When I returned the work at the pass was ended, and I did not personally witness the operations of the Enoch Train upon the bar. When I returned she was employed in other service; but I witnessed her operations then in the harbor of New Orleans.

253 Int. 6. Please to describe this operation of dredging the harbor by the Enoch Train.

Ans. The dredging here *was*, of course, but the operations in the river opposite the city. It was the deepening of the river alongside of the steamboat wharves. The shore was so filled in that the steamboats could not land alongside of the wharves, and we had to lower this shore some eight feet in order to get proper landings for the steamers alongside the wharves. The operation was performed by bringing the boat as near the wharf as possible, and working her screw against the mud until she worked herself into the wharf.

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Int. 7. Please to state whether or not you have examined and are familiar with the dredge-boat Essayons, now operating at Pass à l'Outre, at the entrance of the Mississippi River.

Ans. I have examined the Essayons to some extent. I have seen her in dry dock, and there examined her propeller, I call it, I mean her apparatus for dredging; but I did not examine the internal arrangements or apparatus sufficiently to be able to speak of them.

Int. 8. So far as you examined the dredging-screw of the Essayons and observed the way in which it was constructed for dredging, please compare the same with the arrangement for dredging in the Enoch Train, and state the points of resemblance or dissimilarity.

Ans. In principle they were identical.

Int. 9. Do you know E. L. Brady, the plaintiff in the suit; if yea, when did you first know him, and whether or not he ever showed you a drawing of a dredge-boat; if so, please state when and where it was, and what took place at the time.

Ans. I do know Mr. Brady. I was first introduced to him in 1865. He showed me a plan some time after I was introduced to him, in Mr. Creevy's office, in New Orleans. It was a drawing which he had made. I said, "What's this; it's a new fangle." He said that was something which he had got up. I said, "We had that on the Enoch Train; it

was the same." He said we had no tank in the bows; he said he was going put a tank in forward, and go in for an even keel. I said, "Bless your soul, I have done that before; that is on the Enoch Train." He said his was different by having her on an even keel. I said, "Well, that's not necessary; we sunk one end of the Enoch Train, and
254 got her dredging machinery to the mud, and accomplished more work than he could do; but if he or any other body wanted to sink her forward, all he had got to do was to put in another tank in the bows."

Int. 10. Why did you not put a tank in the bows of the Enoch Train or sink her to an even keel?

Ans. Because, in order to dredge, it wasn't necessary, and was objectionable in this, that she would have a greater draft of water and would be less manageable. With a light boat it would be advisable to put in a tank forward, to keep her steady; but even then I should sink the end with which I was dredging most, and only sink the other end sufficient to keep her steady. I would not work a dredging-boat on an even keel, because there would be more draft of water and greater loss of power.

Int. 11. How long after you were introduced to Mr. Brady did he show you the plan you have mentioned? State the time when he showed you the plan, as nearly as you can, and whether it was before or after Brady came up from dredging at the bar.

Ans. I cannot fix the time with reference to the time when Brady came up from dredging at the bar; but it was several months after I was introduced to him that he showed me this plan in Mr. Creevy's office.

Cross-examination by counsel for complainant:

Cross-int. 12. Were you ever on board the Wiggins; if so, when, where, for how long a time, and for what purpose?

(This interrogatory and all parts thereof objected to by solicitor for defendant as not open on cross-examination.)

Ans. Yes; before she was purchased by the parties that purchased her for a dredging-boat, and afterwards, after she had been fitted up. In Algiers and in the city of New Orleans. First time, I went on board the Wiggins to examine her for the parties who proposed to purchase her, to see whether she was a strong and capable boat. I think I must have remained on board about an hour at this time. Afterwards I went on board several times, and remained ten or fifteen minutes at a time. My last visits were out of curiosity.

Cross-int. 13. What personal knowledge have you of the Enoch
255 Train? Were you ever an owner of any part of her? If so, what part, and when? Did you ever assist in making any alterations in her?

Ans. The personal knowledge gained by being aboard of her, and owning half of her. I did own one-half of her. When she was purchased in Boston in 1859, she was purchased by my firm of Hyde & Mackie, both partners having equal interests, and we owned her up to the latter part of 1861. I never personally assisted in making any alterations in her, but alterations were made by my firm.

Cross-int. 14. Had not the Enoch Train one tank only, and that in the stern?

Ans. Yes.

Cross-int. 15. What has been your business for the last five years?

Ans. That of superintendent of dry dock, and manager thereof.

Cross-int. 16. Has said McAllester during that time employed you or given you employment? If yea, when, where, and what?

(The interrogatory objected to by solicitor for defendant as irrelevant.)

Ans. No.

THOS. G. MACKIE.

Deposition of William H. A. Putnam.

Direct examination by counsel for defendant:

MARCH 24, 1870.

Int. 1. Please state your name, age, residence, and occupation.

Ans. My name is William H. A. Putnam; my age is thirty-eight years and upwards; my home and residence and that of my family is at Salem, Mass.; I am in the employ of the United States Government, now on board the Essayons, as commander, and have been so since the 1st of June, 1868.

Int. 2. What was your occupation previous to that time; and, if you had been a ship-master, please state how long you had been so employed, and what your experience in command of vessels has been.

Ans. Ship-master; so employed since November, 1858. I have generally commanded sailing-vessels in the China and East India trade, making occasionally a voyage around Cape Horn.

256 Int. 3. Where was the Essayons when you took command of her in June, 1868, and where has she been since, and how engaged?

Ans. She was in Boston when I took command of her. I took command of her the day she left port for New Orleans; we arrived here about the middle of July, 1868, and have been in the Mississippi River ever since, at Pass à l'Outre, dredging, or at New Orleans, whenever she had occasion to come.

Int. 4. Please to describe the Essayons and her apparatus for dredging.

Ans. She is a screw propeller of about six hundred and fifty tons, registered burthen, measuring as we would measure a merchant vessel, with one engine for propelling, two engines for driving the dredging screw, and a small double engine at each end for the circulating pumps and pumping out tanks, and a donkey-engine for pumping, and a small engine on deck for hoisting the dredging-rake, coal, etc. Last summer we had another little engine put in for feeding the donkey boiler. At one end is an ordinary propeller's screw, commonly used for propelling a vessel, and at the other end a screw larger, used for dredging; the last-named screw has a different pitch in its blades from the one first named. And connected with the vessel is a rake or drag, with a heavy back to it, which may be applied at either end of the vessel in the rear of the screw. The strap to which the rake is attached is above the screw, at each end, and as we lower the rake it drags on the bottom of the river in rear of the screw. At each end of the vessel is a mast, boom, tackle, and chain, for the purpose of hoisting and lowering the rakes or drags. Both ends of the hull of the vessel are exactly alike.

Int. 5. Please to state the mode of operation in dredging of the Essayons, as actually conducted by you since you have been at Pass à l'Outre.

Ans. The method we use is to go outside the bar into deep water; then we sink the dredging end of the vessel by filling up the tanks at that end with water, to any depth required. Then we start the propel-

ling screw at the other end of the vessel, and go in with that until the vessel grounds; then we stop the propelling screw and start the dredging screw, and as that screw revolves, it cuts up the mud at the bottom and drags the vessel after it at the same time; after going as far as we wish we stop the dredging screw, lower the rake at the dredging
257 end, and back out into deep water, using either or both of the screws to go back with, thus dragging the mud after us that the dredging screw has cut up from the bottom, and carrying it out into deep water; or rather, the operation is, that the dredging screw agitates the mud and throws it up into the surface current, and the current takes it out to a large extent, while the rake takes fresh hold of the bottom, and also carries out whatever is broken up by the screw and settles from the current. After backing out into deep water, we hoist the rake and go back again and repeat the operation. When we first arrived at the bar, we made several experiments as to the best mode of dredging; but the mode above described we found to be the correct one, and have ever since used.

Int. 6. What were the experiments that you have mentioned?

Ans. They were working over the whole length of the bar, and using both screws at the same time, propelling with one, and dredging with the other.

Int. 7. You have stated that in working, you sink the dredging end of the Essayons; state whether or not you have always done so, so that the dredging end has in the working always been lower than the other end or not, or whether you have ever operated her upon an even keel.

Ans. We have always done so (i. e., sunk the dredging end), so that the dredging end has in the working always been lower than the other end; we have never operated her on an even keel.

Int. 8. If I understand it, then, you always go at the mud with the nose of the ship down?

Ans. Yes, sir.

Int. 9. In your operations, how much deeper have you put the dredging end than the other end of the boat? State the difference in depth, as you have actually had it.

Ans. From one to four feet, occasionally more than four feet; in one or two instances four feet and a half; in these instances she was drawing twelve feet of water, but the dredging end was drawing sixteen and a half feet.

Int. 10. Please to state whether or not the operation with the rake or scraper, which you have before mentioned, forms an essential part of the process adopted in the working of the Essayons.

258 Ans. Yes, we have always considered the rake essentially necessary in connection with the screw, because, otherwise, we should have to depend entirely on the current to remove the mud broken up by the screw, and the rake also aids the screw in throwing the mud into the upper current.

Int. 11. In speaking of the screw used for dredging, you have said that it was larger than the other screw, and its blades set at a different pitch; please to explain what you mean by this, and please to describe the screws.

Ans. I mean by larger, larger in diameter; the dredging screw is fourteen feet in diameter, and the propelling screw is twelve feet. Both screws are attached to the shaft in the same way, and horizontally. The dredging screw is a true screw, while the propelling screw has an expanding pitch to its blades, to give it greater power of propulsion.

Int. 12. Please produce to the commissioner taking your deposition, that he may annex the same, any sketch or photograph of the Essayons which you may have in your possession.

Ans. I now produce a photograph of the Essayons taken in the latter part of July, 1868.

(And the commissioner hereto annexes the same, marked "Exhibit D, A. B. L., commissioner.")

Cross-examination by counsel for complainant:

Cross-int. 13. What has been your employment during the last five years, and where?

Ans. In March, 1865, I was at Singapore, East Indies, in command of the ship Alexander; thence I came to the United States, arriving in April, 1866; in August, 1866, I sailed in command of the same ship from Boston for Melbourne, Australia; thence to New Castle, New South Wales; thence to Hong-Kong, China; thence to Singapore; thence to Penang; thence back to Singapore, and from Singapore to Boston, arriving in Boston in the latter part of January, 1868. Then I remained attached to the same ship there until the latter part of February, 1868. Then the ship was sold, and I remained at home until I took command of the Essayons in June, 1868. Then I came here, and have been here ever since in command of the Essayons, except for two months last summer, when I was North on a vacation.

259 Cross-int. 14. Are you, or have you been, interested in Bishop's cones, or in any patent with one Bishop? If so, when, and to what extent?

(Objected to by solicitor for defendant as not open on cross-examination.)

Ans. No, sir.

Cross-int. 15. Was that patent adopted, or partially adopted, on the Wiggins?

(Same objection as above.)

Ans. I don't know.

Cross-int. 16. Were not the screws in Bishop's patent quite similar to grain elevating screws? Describe said patent particularly. Were they (the screws) worked horizontally? Were they worked, to your knowledge, over six feet below the surface of the water?

(Same objection as above.)

Ans. I don't know. I cannot describe said patent. I cannot tell how the screws were worked. I know nothing about it.

W. H. A. PUTNAM.

Deposition of William Creevy.

Direct examination by counsel for defendant:

MARCH 24, 1870.

Int. 1. Please state your name, age, residence, and occupation.

Ans. My name is William Creevy; my age is fifty years and upwards; my residence is the city of New Orleans; my occupation is that of ship agent.

Int. 2. Do you know Edwin L. Brady, the plaintiff in this suit; and, if so, when did you first become acquainted with him?

Ans. I do; I first became acquainted with him some time in the summer of 1866. He was then captain of the steamship Missouri.

Int. 3. Please to state whether or not, in 1866 and 1867, you were engaged with said Brady and others in an undertaking to dredge the Southwest Pass at the mouth of the Mississippi River; if yea, what was this enterprise, how was it carried out, and who was engaged in it with you?

260 Ans. I was so engaged in such undertaking; this was an undertaking by contract with the Secretary of War, through his agent, Col. McAllester (afterwards gen.) to open a channel across the bar at the Southwest Pass, at the mouth of the Mississippi River, eighteen feet deep, and two hundred feet wide, and maintain the same three months after completion. We procured for this purpose a vessel called the Wiggins Ferry, fitted her up with suitable machinery, and sent her to the bar at the Southwest Pass to perform the work. Horace Tyler, John Armstrong, John Roy, Edwin L. Brady, and myself were engaged in this undertaking. E. B. Bishop, of this city, was to have a contingent interest in any profits to be realized from the undertaking.

Int. 4. How was the Wiggins Ferry fitted up, who had the superintendence of fitting her up, when did you commence to fit her up, and how long did it take to fit her up before she was ready to operate?

Ans. She was fitted up with Bishop's cones attached to the bows of the boat. Edwin L. Brady had the general superintendence of the whole matter of fitting her up. Mr. Roy was connected with Armstrong's foundry, which furnished the machinery. We commenced to fit her up some time in the autumn of 1866. I think it took until some time in March, 1867, before she was ready to operate.

Int. 5. Please to state where the fitting up was done, and when, if afterwards, she left for the bar, as nearly as you can?

Ans. At a wharf adjacent to Armstrong's foundry, on the New Orleans side of the river, in the city; she left for the bar about the middle of March, 1867.

Int. 6. How often, if at all, did you see Mr. Brady during the time she was fitting up as aforesaid, and whether or not you conversed with Mr. Brady; and, if so, how frequently during this time about the Wiggins, and the matter of the dredging?

Ans. I saw him very often, indeed, perhaps daily. I had very frequent conversations with him about the Wiggins, and the matter of the dredging; he consulted me about the whole thing while it was going on.

Int. 7. Whether or not you went to the bar with the Wiggins Ferry when she went down, who was in command of her, and, if you say Mr. Brady went down in command of her, please state how long he remained at the bar; and when, if at all, he came up the first time?

261 Ans. I did not go to the bar with the Wiggins Ferry when she went down. Capt. Brady was in command of her. I think he came up for the first time some time in April, but I cannot state definitely.

Int. 8. Please to state whether or not, at any time, Mr. Brady brought into your office a sketch of a dredge-boat purporting to be made by himself, and differing from the plan adopted on the Wiggins Ferry; and, if so, please to fix the time, if you can by reference to the time, when the Wiggins went to the bar, or otherwise.

Ans. He either brought or sent to my office such a sketch or drawing. It was some time after the Wiggins went to the bar. There were two sketches or drawings; both were sent or brought to me after

Mr. Brady went to the bar. These sketches have been in my office ever since, and I now produce them to the commissioner to be identified with my testimony herein, for annexation hereto (and the commissioner hereto annexes the two sketches or drawings produced by the deponent, having marked them respectively B and C, A. B. L., commissioner). Which of these sketches or drawings was brought or sent to me first, I cannot now say. They are in the same condition as when first put in my possession. I can only judge of the date when either of them was first put in my possession by the writing upon one, "Patented, April, 1867."

Int. 9. Please to state whether or not you had any conversation at any time with Mr. Brady, about these drawings, or the mode of dredging exhibited by them, either at the time they were furnished to you or afterwards.

Ans. I remember several conversations, but I cannot state particularly about any one, further than to say that they related to these plans, and Brady claimed that this was an improved mode of dredging. I cannot recollect whether Brady handed me these plans, one or both of them, or sent them, or either of them, to me. If he handed them to me, I conversed with him then about them; if he sent them to me, the conversations were soon after he sent them to me, and I had many conversations about this time with him, upon this subject.

Int. 10. Please to state whether or not before Brady went down to the bar, he ever exhibited to you such a sketch, or sketches, or any sketch or drawing of a dredge-boat or apparatus for dredging, designed by him, or purporting so to be, or ever informed you that he had
262 any plan or scheme for a dredge-boat, or for dredging of his own, or different from the Wiggins.

Ans. I do not remember that Brady ever exhibited to me any such plan or drawing; as to plans, the one adopted in the Wiggins was the one approved by Gen. McAllester, but each one—Roy, Brady, and the rest—had his own ideas about it; and each one had some new idea about it nearly every day, by way of improvement on the plan adopted.

Int. 11. Please to look at the certified copy of Brady's patent, numbered 72360, U. S. Patent Office, dated Dec. 17th, 1867, now exhibited to you, and examine the same, and state whether or not the said Brady ever developed to you the plan of a dredge-boat therein contained, or anything in substance like it, prior to his going down to the bar in March, 1867.

Ans. I have now carefully examined said exhibited patent, and can say that he did not.

(Said exhibited patent is hereto annexed by the commissioner, and marked Exhibit E, A. B. L., commissioner.)

Cross-examination by counsel for complainant:

Cross-int. 12. What has been your business for the last five years, and where?

Ans. I have been a ship agent during that time, in New Orleans.

Cross-int. 13. Were you interested in the Wiggins contract? If so, to what extent?

Ans. I was; to the extent of one-fourth, originally; one-third afterwards.

Cross-int. 14. Did you not request one Nickerson to write a letter asking the captain of the Concordia, Capt. Winthrop Sears, to let Brady try his plan with his ship? And did you not make that request because said Brady had explained or talked with you about his plan?

(This interrogatory and all parts thereof objected to by solicitor for defendant as not open upon cross-examination.)

Ans. I think such a letter was written to Capt. Sears by my firm, with my consent; but I think I did not write such letter myself. I did authorize the writing of such letter because said Brady had explained or talked with me about his plan.

263 Cross-int. 15. Did not said Brady place in your office a picture, in a frame, of an external view of a dredge-boat some months before he obtained his patent? When did he place such picture or drawing in your office? Describe the same, and state what became of it.

Ans. Yes, sir; as I have before stated; I have stated the time already as accurately as I can. The same was a plan for dredging by conical screws, and the same is hereto annexed.

Direct examination resumed de bene esse, and not waiving objection already made:

Int. 16. When you speak about a letter being written to Capt. Sears, suggesting that Brady should try his plan in getting Capt. Sears' vessel over the bar, and say that this was in consequence of Brady's explaining his plan to you, do you mean anything more than turning the ship stern foremost and working her screw upon the bar; is not this all that you mean by the expression "his plan"?

Ans. I mean nothing more than so turning the ship, the Concordia; that is all that I understand Brady termed "his plan."

Int. 17. He said nothing about water-tight compartments, or the arrangement and combination shown in his patent, did he?

Ans. No, sir.

WILLIAM CREEVY.

Deposition of Charles W. Howell.

Direct examination by counsel for defendant:

Int. 1. Please state your name, age, residence, and occupation.

Ans. My name is Charles W. Howell; my age is twenty-eight years and upwards; I am captain and brevet major in the Corps of Engineers in the United States Army, now stationed in New Orleans, and having charge of the defences of New Orleans and the work now going on for the improvement of the entrances to the mouth of the Mississippi River. I have been stationed here since June, 1869.

Int. 2. When were you first stationed at New Orleans in charge of defences and excavations, as stated, and have you had charge of them ever since, and what do your duties as to said excavations com-

264 prise, and is the dredge-boat Essayons operating at the mouth of the river under your directions?

Ans. In June, 1869, on the seventh of said month. I have had charge of them ever since. My duties as to said excavations comprise the superintendence of the work, directing the manner in which it shall be carried on, and disbursing the money appropriated for it. I have been twice at Pass à l'Outre while the dredge-boat Essayons has been at work on the bar, and have spent three weeks on board the Essayons while so working. The Essayons, now operating at the mouth of the river, is under my directions, and her commander reports to me weekly, and his reports contain the time and character of the work, and the progress made therein.

Int. 3. Please to describe the Essayons, and the mode of dredging carried on by her at Pass à l'Outre.

Ans. She is a steamship of about six hundred and fifty tons burthen, of the same model at each end of her hull, her hull fitted up with tanks, intended to contain water, to be used in sinking the dredging-screw, so as to bring it into contact with the bottom of the channel; the vessel is also fitted with two propellers, one at each end; one of these is an ordinary three-bladed ship's propeller, twelve feet in diameter; the other is a four-bladed propeller, fourteen feet in diameter, and is made very strong, and is used as an excavator for breaking up the material of the bar, and throwing it to the upper or river current to be carried away. In connection with this propeller is used an iron scraper, or rake, which is lowered behind the excavating propeller, and in combination with it, for the double purpose of carrying out a certain amount of the deposit scraped up by it and of diverting the current thrown from the excavator upward toward the surface. The mode of dredging is by running the dredge-boat with the end carrying the excavator upstream from the deep water outside the bar on to the bar, and with the excavator digging as far into the bar as possible, after which the scraper is lowered and the vessel backed out over the bar. In this operation the end of the vessel carrying the excavator is sunk by admitting water into the tanks, so as to depress it much lower than the other end.

Int. 4. What is the effect of the rake, or scraper, which you have mentioned, and would the action of the propeller in excavating be complete without it?

265 Ans. It collects, while being dragged out, a portion of the material of the bar, and presents it in the most favorable position to be acted on by the current thrown from the screw, and to be deflected to the surface by this current. The action of the excavating screw would not be so effective without it. It forms a backing to the excavating screw which deflects to the upper current a good deal of the material cut up by the screw, which would not otherwise reach the upper current.

Int. 5. What do you consider the essential features of this dredging process?

Ans. Sinking the end of the vessel having the excavating screw, the application of the propeller for excavating, and the use of the scraper, or rake, in rear of the excavating screw.

Int. 6. Has the Essayons ever been worked upon an even keel since you have been in charge here, and what are the orders upon this subject?

Ans. No, not to my knowledge; it is matter of record in my office that my predecessors, Gen. McAllester and Col. Prime, gave orders to work her by sinking her dredging end, and I gave directions to have those previous orders followed.

Cross-examination by counsel for complainant:

Cross-int. 7. What has been your business for the last five years, and where? State fully and particularly as to each year.

Ans. In March, 1865, I was an officer in the Engineer Corps of the United States Army, with the rank of 1st lieutenant, stationed in front of Petersburgh, Virginia. I remained in the army of the Potomac, in the same service, until it was disbanded; in July and August, 1865, I was temporarily stationed in Washington, D. C.; afterwards, until the fall of 1866, I was stationed at Willet's Point, New York Harbor, in command of a company of engineer troops; from that time until June, 1868, I was engaged on the improvement of western rivers, stationed at Cincinnati, Ohio; during the summer and early fall of 1868, I was

in charge of the survey for the Kansas Pacific Railroad, in Kansas and Nebraska; during the winter of 1868–'9, I was chief engineer on the staff of Gen. Sheridan, engaged in the Indian campaign; and in June, 1869, I came here.

C. W. HOWELL.

266 *Deposition of Horace Tyler.*

Direct examination by counsel for defendant:

MARCH 25, 1870.

Int. 1. Please state your name, age, residence, and occupation.

Ans. My name is Horace Tyler; my age is forty-two years and upwards; my residence is the city of New Orleans; my occupation is that of coal merchant, and have been so for the last three years; in 1867, I was agent for a line of tow-boats in this city.

Int. 2. You were one of the parties interested in dredging the Southwest Pass in 1866 and 1867, with the Wiggins Ferry, and you were the contractor with the government, were you not? If yea, how often, if at all, during the time the Wiggins was fitting up, and afterwards, did you see and converse with Edwin L. Brady, the plaintiff in this suit, upon the subject of fitting up the Wiggins Ferry, and of dredging?

Ans. Yes, sir; I saw him almost every day while the Wiggins Ferry was fitting up, and afterwards, after he went to the bar. I saw him once or twice a month, and perhaps oftener, whenever he came up to the city. I furnished one-third of the money for this enterprise, and Brady had occasion to see me very often while she was fitting up.

Int. 3. Do you remember when the Wiggins Ferry went from the city to the bar?

Ans. About the middle of March, or some time in the month of March, 1867.

Int. 4. Please to state whether or not, before the Wiggins Ferry went to the bar, at the time aforesaid, Mr. Brady ever developed to you a plan or scheme for a dredge-boat, differing from that adopted in the Wiggins, and like that shown in Brady's patent from the United States, numbered 72360, or any plan or scheme like those shown upon the exhibits marked A, B, and C, hereto annexed, or any plan or scheme for a dredge-boat, or for dredging, except what he was carrying out upon the Wiggins, or showed you any sketch or drawing of any kind of any such boat, apparatus, or scheme, (the commis-
267 sioner here shows to the witness United States patent numbered 72360, being Exhibit E, hereto attached; also Exhibits A, B, and C, hereto attached), or said anything to you about any such plan, or scheme, or sketch.

Ans. Not to my recollection.

Int. 5. Whether or not after the Wiggins Ferry went to the bar, and, if so, about what time, said Brady showed you either of the Exhibits A, B, or C, hereinbefore referred to, or others like them, or other plans of his own, or purporting to be such, and had any conversation with you about them. If so, state what he showed you and the conversation or conversations.

Ans. Some time after the Wiggins went down, and while she was at the bar, I went down, and Brady had certain plans on his table, in the cabin of the Wiggins, substantially the same as Exhibits A and B, now shown to me, and he was talking about them there to Mr. Roy and others who were on board in my presence; he made a business of

showing them to all his friends when they came on board. They were on a drawing board in his cabin, on the table, and there was nothing private about them. Afterwards, when he came up to the city, he explained them to me and others, and I saw sketches of the same thing in Mr. Creevy's office.

Int. 6. Please to state whether or not General McAllester was there at the time you speak of when Brady showed you these plans on board the boat or whether, to your knowledge, he had been down to the Wiggins Ferry and had come up previously.

Ans. He was not there; he had been down and come up previously.

Cross-examination by counsel for defendants:

Cross-int. 7. What has been your employment during the last five years, and where?

Ans. My employment from March, 1865, to 1867, was that of agent of tow-boat line, and since 1867 my employment has been that of coal merchant; all in this city of New Orleans.

HORACE TYLER.

268 *Deposition of Ephraim B. Bishop.*

Taken de bene esse March 28, 1870, at New Orleans, in the district of Louisiana, in behalf of the defendant, the said witness living at a greater distance from the place of trial than one hundred miles, neither the adverse party nor his attorney being within one hundred miles of New Orleans, before Alanson B. Long, U. S. commissioner.

Direct examination by counsel for defendant:

My name is Ephraim B. Bishop; my age is sixty years and upwards; my residence is in New Orleans, and has been so for the eleven years last past; my business is that of a commission merchant, also an inventor to a considerable extent. I am the patentee in patent issued by the United States "for machine for deepening the channels of rivers and harbors" on the 13th April, 1858, and renewed on the 14th July, 1868, commonly called "Bishop's patent dredger," or Bishop's screws or cones. At the time this invention was made by me I lived in Arkansas. At the time this thing was thought of I resided in Van Buren, Arkansas. About 1852 or 1853 I was then keeping store at Van Buren, Arkansas. The difficulty of getting goods up the Arkansas River in consequence of sand-bars was very great—so great that we had a cargo of goods, nearly a whole boat load, that was detained in consequence of sand-bars for at least eight months before she could reach Van Buren from Pine Bluff, Arkansas. Seeing this necessity of removing these obstructions and knowing all about the usual machines up to that date that had been invented, and their capacity, and knowing of the very great amount of sediment that must be removed to do any good, it appeared to me absolutely necessary that machinery of greater capacity and strength should be invented, and, thinking upon this subject, I thought of and planned out one or more spirally-flanched screws, to be rotated by machinery on deck of a boat or in her hull, with the large ends of the spiral screws down, with sharp cutting corners or points, the screws to revolve right and left powerfully, intended to elevate the sediment up the inclination of the drum by reason of the powerful motion of those drums; the water being comparatively still, would
269 necessarily force the sediment up the inclination of the screws, and throw the sediment off to the right and left into the water,

which could carry it to harmless localities. This was the first plan that was afterwards developed into my patent.

The first reason for my thinking that a wheel would stir up the mud, was that Capt. Withenbury had a stern-wheel steamer running on the Arkansas River, and when he couldn't go over a sand bar bow foremost, he turned the stern of his boat and backed up or down over the bar, as the case might be. The action of the wheel disturbing the sediment, removed the same below by reason of the current, so that I inferred that a boat could always cut its own way by properly-shaped screws. The stern-wheel of a river steamer, such as Capt. Withenbury had, is usually as long as the boat is wide, formed of wheel-arms and planks like an undershot mill-wheel; the wheel is placed on outriggers of timbers at the stern and revolves on a horizontal axis. The disturbing of the bar by this wheel, and the further action of the current, usually removed the bar thus disturbed, and cut a passage through, and thereby cut a channel in which other boats could follow. The principal objection to that mode of removing a bar was that the sediment sucked under the boat near the bows. Consequently I set to work to get a screw or screws that would throw the sediment out and up, puddling it into the water so that the current might carry it off. Capt. Withenbury must have made a half dozen trips up the Arkansas River, to my knowledge, and I suppose he went through a hundred sand bars at a time when other boats didn't attempt it. He used to work through, I know, when other captains didn't go, and we shipped by him on that account. The plan shown in my patent was finally adopted by me and patented in preference to the plan above described, because it was less liable to break and get out of order, and was more easily adjusted, lowered and raised.

I remember having a conversation with a Mr. Kimball about the use of screws in dredging. This was Mr. Kimball, a contractor with others for dredging the Southwest Pass at the mouth of the Mississippi, or he was concerned in that dredging in some way. My conversation with him was about the year 1859. At that time Hyde & Mackie or Mr. Hyde had the contract, either alone or with others, for dredging the Southwest Pass, and Kimball was concerned with them. Kimball came to the St. Charles Hotel, where I was, and saw my model, and talked with me about adopting my plan; after talking with me, he said he would talk with the others; he went away and came back again and expressed doubts about its feasibility, and that one of the others interested with him would not try any other plan than they were then using, something like a scraper on a vessel. I talked with him, and, in trying to prove or illustrate my plan to him plainly, said that if a screw-propeller, with two screws, were brought in close proximity with the bar, and revolved at the usual speed, so as to throw the water from the centre to the circumference, that the water itself would wash the sediment of the bar away; but more especially if the flanges of the propellers touched the sediment of the bar, it would be sure to cut a portion of it away; I told him that even a single propeller, ballasted down at the stern, must remove some sediment; how much more would two screws do, and how much more would my plan, properly adjusted, do. The next thing I heard was that Kimball had gone on to Boston and brought the Enoch Train down here, and put her at work on the bar. Mr. Kimball left New Orleans afterwards; I met him once subsequently at Mobile; we were there together to bid for a dredging job, and I haven't seen him since; he went North then, and I don't know where he is now.

My plan was employed on the Wiggins Ferry in the years 1866 and 1867, by Messrs. Creevy, Armstrong, Tyler, and others; and I was to receive a compensation in case they realized from the government; but I have never received anything.

E. B. BISHOP.

Deposition of Chauncey Tyler.

Taken de bene esse March 28, 1870, at New Orleans, in the district of Louisiana, in behalf of the defendant, the said witness living at a greater distance from the place of trial than one hundred miles, neither the adverse party or his attorney being within one hundred miles of New Orleans, before Alanson B. Long, U. S. commissioner.

Direct examination by counsel for defendant:

My name is Chauncey Tyler; my age is forty-one years and upwards; my residence is New Orleans, and has been so for the six years last past; I am now in the coal business in this city. I am a brother of
271 Horace Tyler, who is a coal merchant in this city; and in 1866 and 1867 I was associated with said Horace Tyler in the tow-boat business in this city. I know about the enterprise of dredging the Southwest Pass at the entrance of the Mississippi River with the Wiggins in 1866 and 1867, and had more or less to do with it all the time she was fitting up and afterwards. I used to see Edwin L. Brady, who had charge of fitting her up, very frequently. I also used to see frequently John Roy and all parties concerned. Brady used to come up to our office very frequently, and I had constant communication with him all the time the Wiggins was fitting up. I used to talk with him very often about the Wiggins and her apparatus, and about dredging generally, and he was very confident of her success. I never heard him, that I remember, during the time that she was fitting up or before she went down to the bar, speak of any other plan for dredging or for fitting up a boat for that purpose, or say that he had any or suggest any different mode or device than that carried out in the Wiggins. I have frequently been to his room in the city of New Orleans, and was frequently on board the Wiggins while she was fitting up, and never saw any sketch or drawing of any kind, to my recollection, of any plan for dredging beside that carried out in the Wiggins; afterwards, when Brady returned from the bar, I saw sundry sketches, purporting to have been made by Brady, of a vessel made with water-tight compartments, and a fixed or stationary screw or screws solid to the boat. One of these drawings was in the office of William Creevy, in this city, hung up for some time, and one of them—not the one stuck up in that office—had a long conical screw or two long conical screws at the bow of the boat, designed for dredging. I mean by a fixed or stationery screw, of course, a revolving screw, but unadjustable, affixed to a shaft, exactly like a common propeller.

CHAUNCEY TYLER.

272 *Deposition of Henry Wright.*

Taken, de bene esse, March 23, 1870, at New Orleans, in the district of Louisiana, in behalf of the defendant, the said witness living at a greater distance from the place of trial than one hundred miles, neither the adverse party or his attorney being within one hundred miles of New Orleans; before Charles S. Rice, U. S. commissioner.

Direct examination by counsel for defendant:

My full name is Henry Wright; I am forty-nine years of age; I reside in the city of New Orleans. I am captain of a steamboat, and have followed this occupation for the past thirty years at the port of New Orleans.

Int. 1. Whether or not you were the master of the steamboat Enoch Train, during the operations performed by her in dredging at the mouth of the Mississippi, in the year 1859; if so, please state the construction of said boat, and specially describe the apparatus used for dredging.

Ans. Yes, sir; she was a double propeller; her draft was eighteen feet of water when sunk at the stern and working. We used to sink her by a trap-door or valve, opening into a water tank, and the dredging was performed by the screws of the propeller. These screws were the ordinary screws used by propellers now. They were nine feet in diameter. By a double propeller I mean she had two screws at the stern, one on each side of the stern post or quarter.

Int. 2. When did you first go to the bar with the Enoch Train, and how long did you operate with her there?

Ans. I went to the bar with her some time in May, I think. It may have been later; we operated till the latter end of July. I know we operated about three months.

Int. 3. Describe the operation of dredging by the Train, as performed at that time.

Ans. We used to work our propellers in cutting up the mud. The operation consisted in cutting through the mud with our propellers. Sometimes we went at the mud stern foremost, sometimes sideways, and sometimes bows on. When I went to the bar at first, there was
273 about fifteen feet of water on it, and when I quit operating there were eighteen feet on it in most places. Where the water was shallow we invariably went at the mud stern foremost. The stern was always loaded down to eighteen feet when dredging, but the bows were not loaded down. In dredging, the stern was always several feet lower down than the bows; say three or four feet.

Int. 4. State whether or not, in any instance, you used the Train to cut out a ship, or to dredge elsewhere than at the bar.

Ans. We cut out a ship drawing eighteen feet of water. She had got aground in fifteen feet on the bar. It took a part of one day and a night. We were not more than three or four hours in actual dredging. We also came up from the bar and dug out Messrs. Hyde and Mackie's dry-dock, in Algiers, which had got filled with mud and had sunk. We did this in the same way I have before stated.

Int. 5. State whether or not you were master in charge of the P. F. Kimball, dredging at the mouth of the river, before the Train was sent there.

Ans. I was.

Int. 6. Please state whether or not you had ever been engaged in any dredging operations in the Mississippi River previously.

Ans. I had; I was pilot on board one of the boats sent down to dredge by the Good Intent Tow-Boat Company, some five or six years previous to the operations of the Enoch Train; I was pilot there about a year at that time.

Int. 7. If you know how the Enoch Train came to be employed in this service, please to state.

Ans. We had experience by several large French steamers coming here, drawing eighteen feet, which dug themselves through fifteen feet

by turning stern on, and using their propellers. This was during a year or two previous to the operations of the Train. As nearly as I remember, the name of one of these steamers was the Francis Argo. I remember she came here several trips, and was running here. Mr. Hyde, Mr. Mackie, and myself talked the matter over, and I also talked over *it* with some captains of tow-boats in New Orleans.

Int. 8. Please to state whether or not you are acquainted with the dredge-boat Essayons, and whether or not you are familiar with her mode of operations and apparatus; and, if yes, how familiar.

274 Ans. Yes, sir; I have been aboard of her several times; have seen her in the dry-dock; have seen her operating; I have examined and understand her machinery and mode of operations.

Int. 9. Please state what her mode of operations and her apparatus for dredging are.

Ans. The apparatus of the Essayons, and the way she operates are the same as those of the Enoch Train. There is no difference in the principle of their operations. The Essayons always operates in the same way, so far as I have seen her; the same way in which we use the Enoch Train. She goes at the mud in the same way, and sinks the end where the dredging screw is, and the screw is similar to that of the Enoch Train.

Int. 10. Please to compare the Enoch Train and the Essayons, their respective modes of operation, and machinery, and state whether or not, in your opinion, the same are different or identical in principle; and, if different, state the points of difference.

Ans. In comparing them, I would say that the machinery of the Essayons may be, perhaps, finer than that of the Train; but, so far as principle was concerned, it is the same in both.

Int. 11. You have stated your occupation as captain of a steamboat. What kind of a steamboat are you master of, and how long have you been so employed?

Ans. I am captain of a tow-boat plying between New Orleans and the mouth of the Mississippi River, towing vessels up and down the river, and over the bar. I have been thus engaged for about eighteen years.

Int. 12. How constantly, during the three months you have mentioned, was the Enoch Train engaged in dredging?

Ans. Every day except Sundays, unless the weather was stormy—and the weather was mostly fine—or unless we had to stop to wash out our boilers, or something of that sort.

H. WRIGHT.

275 *Deposition of William A. Hyde.*

Taken de bene esse March 23, 1870, at New Orleans, in the district of Louisiana, in behalf of the defendant, the said witness living at a greater distance from the place of trial than one hundred miles, neither the adverse party nor his attorney being within one hundred miles of New Orleans, before Charles S. Rice, U. S. commissioner.

Direct examination by counsel for defendant:

My full name is William A. Hyde. I reside in the city of New Orleans. I am forty-seven years of age. I am by occupation a ship-builder.

Int. 1. What was your occupation in the year 1859, and for how long had you been engaged in the same?

Ans. I was a member of the firm of Hyde & Mackie, and as such,

proprietor of the New Orleans dry docks Nos. 2 and 3, located at Algiers, opposite the city of New Orleans. Had been such proprietor since the year 1848.

Int. 2. How extensive were they and how extensive was your business?

Ans. The capital invested was two hundred thousand dollars, and our business was very large—perhaps the largest in that line done in the city of New Orleans.

Int. 3. Please state whether or not you know of a contract, made between the United States Government and Charles H. Hyde, in 1859, for excavating the channel at the Southwest Pass, at the mouth of the Mississippi River, and whether or not Mr. Mackie, your partner, and yourself were the securities for the performance of said contract.

Ans. I do know of such a contract, and Mr. Mackie and myself were such sureties.

Int. 4. By whom was said contract carried out and executed, if at all, if you know?

Ans. By Hyde & Mackie; that is, by my partner and myself.

Int. 5. What vessels did you use for this purpose?

Ans. We had two steamboats, P. F. Kimball and Enoch Train.

276 Int. 6. Please to describe the Enoch Train and her dredging apparatus and machinery, and how she was fitted up for dredging.

Ans. She was a propeller of burden between three and four hundred tons, with two propeller screws at her stern, about nine feet in diameter each; the cylinders were thirty-six inches in diameter and thirty-four inches stroke; she had one doctor engine; was fitted also with a large wrecking pump, with two low-pressure boilers; engines were also low-pressure engines. Her draft of water, in ordinary trim, with three hundred barrels of coal on board, was about thirteen feet aft, and a little less at the bows. By ordinary trim I mean the usual sailing trim. The propellor screws were one on each quarter, or each side of the stern-post. Before going to dredging on the bar, I fitted her up with a water-tight apartment, or tank, at the stern, by a bulkhead running athwartships, say about twenty or twenty-five feet from the stern. That space was divided by a fore-and-aft bulkhead, making two water-tight compartments.

Int. 7. Please to state when the Train began work upon the channel or bar at Southwest Pass and how long she worked there.

Ans. As near as I can recollect, she arrived out here from Boston in April or May, 1859. I think it was May. She began operations soon afterwards, and so continued till about the month of September, I should say. The contract was up in September, and she worked till about that time.

Int. 8. Who was in charge of the Enoch Train?

Ans. Capt. Henry Wright, as master.

Int. 9. State whether or not you were familiar with the mode of operating her, and the way she worked at the bar; and if so, how familiar.

Ans. I was familiar. I went down to the bar frequently, and had a general oversight of the whole arrangement, and saw her operating when I was there.

Int. 10. Please to state her mode of operation, the mode in which she was operated, in forming this excavation, if you know, and so far as you can state.

Ans. The mode of filling the compartments was by stop cocks in the

sides of the vessel opening into the water-tight compartment; the draft of water could be increased from her natural draft of water
277 say thirteen feet to eighteen feet, according to the qua'lity of water let into the tanks. The mode of operating was by running the vessel up and down over the bar, and thus stirring up the mud with the propeller screws. When the water was too shoal for her to pass over, the stern of the vessel was turned to the bar, and she was run stern on, the engines being reversed. Whenever we got done working on the bar there was a valve in the water-tight compartments for letting the water into the hold of the vessel, from which the water was pumped out of the vessel by the steam pumps, and the vessel would then be left at her ordinary draft.

Int. 11. State whether or not all the operations at the bar in excavating, under this contract, were under your directions and the directions of Mr. Mackie continuously.

Ans. They were.

Int. 12. If you know of any method of dredging or mode of operating by the Enoch Train, while she was at Southwest Pass, otherwise than as you have before stated, please to state it.

Ans. There was none other than as I have stated.

Int. 13. Please to state how you happened to employ this mode of dredging by the Enoch Train.

Ans. Well, I thought it would be an effectual way of removing the mud from the bar; that by the screws coming in contact with the mud and deposit, and the revolutions of the screws about sixty times a minute, would create a current of water by which the sediment would be washed away. This was a plan which Mr. Mackie and I had adopted previous to buying the boat Enoch Train. We had talked it over and conferred with others about it, and sent Mr. Kimball on to New York and Boston to buy a boat for this purpose, and he bought the Enoch Train for us.

Int. 14. Who was Mr. Kimball, referred to in your last answer?

Ans. He had been connected with the contractors, I believe, under a previous contract for deepening the passes at the mouth of the Mississippi.

Int. 15. Have you ever examined the dredge-boat Essayons, now at work in the passes of the Mississippi, and are you familiar with the mode in which she is constructed and her mode of operations in dredging?

278 Ans. I went on board of her some six months ago, and was shown through her engines by her chief engineer. I think I am familiar with her mode of operations, though I have never seen her at work. I have also seen her in the dry dock.

Int. 16. State whether you discover any difference in principle between the construction of the dredging apparatus of the Essayons and that of the Enoch Train. If yea, what?

Ans. The principle I consider the same, although the construction of the two boats is different in some respects.

Int. 17. What became of the Enoch Train, if you know; and state whether or not you have any drawings, models, or representations of any kind, of her, or if you know of any.

Ans. We sold the Enoch Train, and I believe she has since been sunk; so I have been told. We had the carpenter's model, which, when we bought the boat, was sent out to us in her. I do not know what has become of that model. I know of no other representation, model, or drawing of her.

Int. 18. Please state whether or not the Enoch Train excavated the mud at any time from your dry dock. If yea, state what took place.

Ans. She did. It happened in this wise: We had the ship Felicèe, of about thirteen hundred tons burthen, in one of our dry docks, to which ship we had done very extensive repairs. She was some two months in the dock. The dock was of a construction that closed with a gate after the ship was in and the water was pumped out. After the water was pumped out, we lowered the gate for the purpose of making it more convenient to get our material on board the dock. We built a temporary gate to keep out the water, about two (2) feet high when the gate was lowered; the outer end was about three feet under water, and from its being so long in that position, a large quantity of mud had accumulated from deposits from the water upon the gate, of which we were not aware at the time of letting the ship out of the dock. After taking the ship out of the dock we could not close the gate, from the quantity of deposit on it, and we could not raise the dock. She remained in that condition from Saturday until Monday. I sent word on Saturday for the Train to come at once to town. She was at that time at work on the bar. She came up on Monday, and I placed
279,280 her screws over the gate of the dock, and secured her by fasts to keep her in that position while working her screws. In about one hour's time she had washed all the mud from the gate, and we then pumped our dock up, which would have been a total loss if it had not been for the Train.

W. A. HYDE.

281 EVIDENCE FOR COMPLAINANT IN REPLY.

Taken in the city of New York, August 18 and 19, 1876, pursuant to the sixty-seventh rule of the Supreme Court of the United States, in equity, as amended, and the order of court, entered July 18, 1876, before James T. F. Randolph, examiner.

Deposition of Edwin L. Brady.

Direct examination by JOHN S. ABBOTT, esq., of counsel for complainant:

Int. 1. Are you the complainant in this case?

Ans. I am.

Int. 2. What has been your principal occupation since you gave your testimony which appears in the printed record in this case?

Ans. Consulting engineer, construction of public works, erection and adaptation of all kinds of machinery, with offices at 61 Montgomery street, Jersey City, and 23 Park Row, New York, as an expert, consulted by master mechanics and builders of machinery.

Int. 3. Have you carefully examined the proofs taken for defendant and in the printed record in this case, and especially all of the testimony relating to or having any reference to the Enoch Train?

Ans. I have, very carefully.

Int. 4. I now put into the case a sketch or drawing, marked Exhibit A[1]. Please state what it is and by whom it was made.

Ans. It's a sectional view of such a boat precisely as all the witnesses for the defence described the Enoch Train to have been. It was made by myself.

Int. 5. I now put into the case a photographic exhibit, marked Exhibit B[1]. Please state what it is.

Ans. It's a photographic view of the drawing attached to patent No. 72360 of E. L. Brady's dredge-boat for excavating, with the
282 additions of the word "water line," blue pencil marks representing water, and black ink marks representing mud.

(Defendant's counsel objects to the introduction into the evidence of Exhibit B[1], and any testimony founded thereon or relating to it, as not within the rule permitting the present depositions to be taken.)

Int. 6. From what was this photographic impression taken?

Ans. From the official printed report of the United States Patent Office, and is a fac-simile of the drawing attached to my patent.

Int. 7. Please refer to Exhibit A[1] and state what is shown thereon besides sketch of the Enoch Train, and is exhibited or illustrated thereby.

Ans. There is illustrated the mode in which the vessel was operated while acting as a dredge-boat, also the internal arrangements of engine, propellers and water-tank, as described by all the witnesses for the defence in the printed record in this case.

Int. 8. Please now state whether the Enoch Train, as described in the defendant's proof, after she had been changed to what is called in the printed record a dredge-boat, was similar to or substantially like the dredge-boat described in your said letters patent, copied in the printed record in this case, either in principle, construction, or operation, and state also wherein it was similar or dissimilar in the above-named particulars.

(Objected to by defendant's counsel on the grounds that the witness has not been shown competent to testify as an expert, and that expert testimony is not within the rul allowing this deposition to be taken.)

Ans. She was not; in principle she was simply an ordinary tug-boat, and could only be lowered at one end, and contained none of the essentials required to lower her on an even keel, and consequently tip both or either end; and as to construction the Enoch Train had no system of tanks extending through her entire length; she had no screw or mud-fan on her bow, and no machinery or engines in the forward part of the vessel to propel or drive any such device as a mud-fan. As to mode of operation: First, she always worked her stern to the mud and in no other way, and could be worked no other way, as testified by the witnesses for the defence. The Essayons never has been worked that way, always going bow first. In operating the Enoch Train
283 her stern was always sunk six or seven feet more in the water than it would be were she on an even keel; the bow, therefore, must have been raised out of water a corresponding number of feet. In backing the Enoch Train against the mud her rudder must have been thrust into the mud ahead of the screw, consequently the rudder was useless to control the vessel in any desired line or course, rendering the vessel unmanageable. Another difference in her mode of operation is that she only operated three months, after which she was abandoned as a dredge-boat, while the Essayons has successfully worked for nearly seven years.

(Defendant's counsel notices a motion to strike out all reference in the last answer to the Essayons as not within the rule allowing this deposition to be taken, and all reference to the actual operation of the Essayons and Enoch Train, independently of the witnesses opinion of how the said boats could work, on the ground that such evidence is incompetent and hearsay.

The complainant's counsel will not claim that the deponent has any personal knowledge of the practical working of the Enoch Train or of the Essayons, but that the foregoing answer is to be taken as based upon their mode of operation, as described by the defendant's witnesses in the printed record. And inasmuch as it appears that the Essayons is like the complainant's patent dredge-boat, he deems it immaterial whether the comparison is made of the Enoch Train with the Essayons or with the boat described in the patent.)

Int. 9. Your last answer you have spoken of the Enoch Train as described by the defendant's witnesses, after having been changed to a dredge-boat, as to principle, construction, and operation, in comparison with the Essayons. But the interrogatory did not call for that comparison, but for a comparison with "the dredge-boat described in your letters patent." Please state whether there is any difference, or would be any difference, between the Essayons and your said patented dredge-boat, in principle, construction, or operation.

(Objected to by defendant's counsel as calling for expert testimony on the question of infringement not within the rule.)

Ans. In making the comparison I intended to have said such a boat as is described in my patent or the Essayons; for such a boat
284 as described in my patent and the Essayons in principle, construction, and mode of operation are the same, and I so intended in my last answer.

Int. 10. On page 142 of the printed record, the "Pass à l'Outre bar" is spoken of. Do you know where that is? If so, state its location in relation to the city of New Orleans.

Ans. I do. "Pass à l'Outre" is one of the mouths of the Mississippi River, one hundred and five miles from New Orleans.

Int. 11. On the one hundred and seventy-third page of the printed record, "the Southwest Pass" is spoken of. Do you know where that is? If yea, state its location in relation to the city of New Orleans.

Ans. I do. It's one hundred and ten miles from the city of New Orleans.

Int. 12. When your testimony was taken before, please state whether it was taken by a stenographer.

Ans. It was.

Int. 13. On page 79, and in some other parts of your testimony, the name "Crossman" appears, and on page 134 of the printed record, in the testimony of another witness, the name "Claussen" appears. State whether the same person is referred to. If yea, what is the true name and why the different spellings?

(Defendant's counsel objects, on the ground that the evidence called for is not within the rule.)

Ans. They are the same person. Capt. Claussen is the true name. The reason of the different spellings is an error on the part of the stenographer.

Cross-examination by Mr. JENNER, of counsel for defendant:

Cross-int. 1. In what other occupation than that described in your answer to the first direct question have you been engaged since your former testimony was taken? State full particulars, where and how long you have been engaged in such.

Ans. I have been engaged in projecting a water company for the supply of the town of Stamford, Connecticut, with water; I have been engaged with the late A. J. Fitch, of Jersey City, in contracts for timber and have been engaged by said Fitch as an advisary in

285 prosecuting claims and liens against several railroad companies for labor and material. I have been engaged also in making improvements in railroad plans; also as engineer in planning and constructing, Hudson County Elevating Company, and as a projector and corporator in the North Hudson Ferry Company, with which last two enterprises Gen. Geo. B. McClellan, and Noah D. Taylor and Collin Scott have been my associates. I have also been engaged in forwarding the interests of several patents invented and owned by myself; for a short time as business manager for E. M. Stackpole, agent for Texas Star Line of packets, at New York. That is all, I believe.

Cross-int. 2. What proportion of your time, as nearly as you can estimate it, has the said occupation consumed?

Ans. I have always maintained my business and offices as consulting engineer even though attending to the other businesses heretofore named. Not a week has passed for seven years last past but what I have done something at my profession as engineer.

Cross-int. 3. In the construction of what public works other than already mentioned have you been consulted as engineer since your former examination?

Ans. Almost every week by Juan G. Ribon, proprieter Ribon Iron Works, Jersey City, in devising and planning water machinery, sugar machinery, mining machinery, elevators, steamboats, which he manufactures for the South American market. Also by John A. White, Salt Lake City, in reference to mining machinery, construction of railroads. Also by contractors for dock work, making estimates therefor. Also by lawyers having suits and liens against railroad companies in making plans for them, and maps describing property liened on, and also maps and surveys. I have also bid for contracts myself for public work, such as dredging, and dock building, and iron bridge work. Have been agent at this point for the sale of John King's under-water dredges, and Jerome's dry-land excavators for railroads. I also have been consulted by various patentees of engines, railroad snow-plows, and other like machinery, in perfecting and introducing the same to the public, and occasionally in writing scientific articles for the newspapers. I know nothing else.

286 Cross-int. 4. What works on mechanical or engineering science have you read?

Ans. In my former life, when a practical mechanic, I read all the works on engineering as they came out; "The Engineer" by Bourne, Lardner, Haswell, King, Veals, series on water works, sewerage, mining, engineering, all the periodicals, "The Scientific American," and papers of like character.

Cross-int. 5. Have you ever read "Reeve's Topography of Marine and River Bottoms"?

Ans. Partially, but not fully, as my own investigation had been quite as extensive as his, having been many years pursuing the same line of investigation while attached to the United States Coast Survey, especially on the southern coasts and rivers of the United States.

Cross-int. 6. Are you as familiarly acquainted with the work which I last referred to as the others you have mentioned? State the extent as nearly as you can of your acquaintance with it.

Ans. I am not sufficiently acquainted with it to quote from it in any respect, having forgotten almost everything about it except some matters in reference to river bottoms in which I differed.

Cross-int. 7. When did you read it?

Ans. I think I read such a work on river bottoms or looked into it not over a year ago, but don't know—about the time of the proposition of Capt. Eads to build jetties at the mouth of the Mississippi River, and in comparing such proposed system with McAlpine's work on the Danube; at the time I don't think I looked at the title-page of the book, and only recollect the name as it was spoken by my friend who referred to or quoted from it.

Cross-int. 8. Have you ever read Dr. Ure's "Mechanical Dictionary"?

Ans. I have not.

Cross-int. 9. Have you ever consulted it?

Ans. I have not.

Cross-int. 10. When did you make the drawing Exhibit A[1]?

Ans. Aug. 17, 1876—yesterday.

Cross-int. 11. What testimony enabled you to make that drawing or gave you the requisite information? In answering, refer to
287 the printed record page, answer, and name of witness. Answer fully.

Ans. The testimony of William A. Hyde on page 175, answer to tenth interrogatory; on page 176, answer to sixteenth interrogatory; and on page 174, answer to sixth interrogatory. The testimony of Henry Wright, page 170, answer to second interrogatory and answer to third interrogatory. The testimony of Thomas G. Mackie on page 152, answer to ninth interrogatory, and on page 153, answer to fourteenth cross-interrogatory.

Cross-int. 12. Is Exhibit A[1] a scale drawing?

Ans. It is not.

Cross-int. 13. On same exhibit, what does the straight black line next above the mud line, and traversing the blue from the propeller to the bow, represent?

Ans. The line represents the bottom of the boat.

Cross-int. 14. What does the part which I have just marked A represent?

Ans. It is an ordinary tug-boat propeller.

Cross-int. 15. What testimony directed you to put the extreme lower end of the propeller blades on a line with the bottom of the boat?

Ans. It is not so in the drawing.

Cross-int. 16. How many blades are shown in the propeller A?

Ans. Three or four.

Cross-int. 17. Are any of the blades in a vertical position?

Ans. They are.

Cross-int. 18. How far from the bottom line of the boat did you intend to place the lower extremity of the vertical blades?

Ans. Eight or ten inches.

Cross-int. 19. What testimony directed you to so sketch the propeller? Read the language.

Ans. The testimony of Wm. A. Hyde, at page 174, answer to sixth interrogatory, as follows: "She was a propeller of burthen between three and four hundred tons, with two propeller screws at her stern, about nine feet in diameter each;" thus describing an ordinary propeller fitted with twin screws, with which I was perfectly familiar.

288 Cross-int. 20. Mark with the letter B on the drawing what you designed to represent the stern-post.

Ans. There are two stern-posts on the drawing, one on the hull of the vessel, inside the propeller, which I have marked B, and the other false stern-post or rudder-post, which I have marked C.

Cross-int. 21. Where in the testimony do you find a reference to two stern-posts? Read the reference.

Ans. The description referred to is only general, describing the Enoch Train as an ordinary tug, such as I am perfectly familiar with. Description does not say anything of stern-posts at all, though all propellers have them.

Cross-int. 22. Where do you find that the Enoch Train was an ordinary tug?

Ans. Evidence of William A. Hyde, page 174, answer to sixth interrogatory, and in the evidence of Thomas G. Mackie, page 150, answer to fifth interrogatory, in which Mackie refers to a similar but higher priced boat, called the America, which America was afterwards owned by me and my associates, and operated by me at the mouth of the Mississippi River; and in my former deposition in description from one Flynn, and from testimony of all the witnesses for the defence who testify as to the Enoch Train.

Cross-int. 23. Where does Mackie say the Enoch Train was an ordinary tug? And read the reference, if you find it.

Ans. Page 150, answer to fifth interrogatory, thirty-second line: "We talked over the matter of the propeller, and agreed that it would be the best thing; therefore we sent Mr. Kimball on to the North to see if he could purchase a propeller adapted for the purpose. Mr. Kimball left immediately for the North. I received a despatch from him after he arrived at New York, saying that he could buy the propeller America, but the price was too much. He went on to Boston, and from there telegraphed me that he could buy the Enoch Train. I knew about the Enoch Train, having seen her previously in Boston, and we directed him to close the bargain for her purchase. Mr. Kimball therefore purchased her, the Enoch Train, and brought her out here."

289 Cross-int. 24. Where does any other witness say that the Enoch Train was an ordinary tug? And read the reference.

Ans. In the evidence of Henry Wright, 170, first interrogatory and answer, as follows:

"Int. 1. Whether or not you were the master of the steamboat Enoch Train during the operations performed by her in dredging at the mouth of the Mississippi in the year 1859? If so, please state the construction of said boat, and especially describe the apparatus used for dredging.

"Ans. Yes, sir; she was a double propeller. Her draft was eighteen feet of water when sunk at the stern, and working. We used to sink her by a trap-door, or valve, opening into a water-tank, and the dredging was performed by the screws of the propeller. These screws were the ordinary screws used by propellers now. They were nine feet in diameter. By a double propeller I mean she had two screws on the stern, one on each side of the stern-post or quarter."

Also the testimony of William A. Hyde, page 174, answer to sixth interrogatory—the whole of that answer. That is all.

Cross-int. 25. Has an ordinary tug two propellers?

Ans. Very many of them have—quite a common occurrence—but both on the same end.

Cross-int 26. Where in the evidence do you find descriptive words which directed you to place the rudder in the position relative to the propeller shown in the drawing?

Ans. There is no special reference to any rudder in the Enoch Train evidence; but I placed it there in the drawing from my knowl-

edge of vessels, and knowing that it was the only place it could be put to be operated in controlling the vessel, and as in common use in propellers and tugs of like construction.

Cross int. 27. State what part of the mechanism of the stern of the Enoch Train you understood the witness Hyde to refer to on page 174 of the record as the stern-post, and illustrate by a reference to the drawing.

Ans. The line marked B.

Cross-int. 28. Referring to the drawing, how far from the stern-post B did you intend to represent the propeller to be?

290 Ans. There being no measurement in feet or inches given and the drawing being without scale and the description taken from defendant's witnesses, who give no distances, I cannot determine.

Cross-int. 29. Within your experience, how far does the propeller project from the stern-post? Give the limits of variation and confine yourself to tug-boats with double propellers.

Ans. I have known a few in which the propellers were so far under the counter as to be inside of the line of the stern-post; but I have known many and the best one placed far outside of a line of the stern-post from one to three feet, to enable them to get solid water, and varied to the ideas of the builder.

Cross-int. 30. Refer to the drawing, say how far from the stern-post B you designed to represent the compartment designated as the water-tank.

Ans. No distance given. It was designed simply to correspond as to general location, as testified to by the witnesses for the defence—Hyde, Mackie, and Wright, who only stated that the tanks were in the stern.

Cross-int. 31. I read from the deposition of William A. Hyde, page 174, answer to sixth interrogatory: "I fitted her up with a water-tight apartment, or tank, at the stern, by a bulkhead running athwartships, say about twenty or twenty-five feet from the stern." Does the drawing correctly show the situation of a tank so placed with reference to the stern?

Ans. Were it a scale drawing it would, counting the stern from the taffrail or stern line, judging from the size of the boat, but not from the stern-post.

Cross-int. 32. To what did you think the witness Hyde referred to, in the answer quoted, as the stern the line B—or the extreme end of the boat where the flagstaff is placed?

Ans. The extreme after end as measured on the deck.

Cross-int. 33. In the answer quoted, Hyde states that the tank was placed at the stern. Why, then, did you not show on the drawing the tank at the extreme after end as measured on deck?

(Complainant's counsel objects to this question as not correctly stating the witness Hyde's testimony.)

291 Ans. Because, as the drawing was simply a rough sketch made last evening, no measurements were given in any part of the boat, simply because the witnesses Hyde, Mackie, and Wright, gave but one initial measurement and that not definite, the length of the boat not being given at all.

Cross-int. 34. In answer to direct Int. 8, you state "in operating the Enoch Train her stern was always sunk six to seven feet more in the water than it would be were she on an even keel." What authority in the record do you find for that statement? And read the reference.

Ans. By comparing the evidence of Hyde on page 174, answer to

sixth interrogatory, where he says, "Her draft of water in ordinary trim, with three hundred barrels of coal on board, was thirteen feet." By comparing this statement with the deposition of Henry Wright, page 131, answer to third interrogatory, last four lines, "The stern was always loaded down to eighteen feet when dredging, but the bows were not loaded down. In dredging, the stern was always several feet lower down than the bows, say three or four feet." Now, I deduct three more feet immersion from the thirteen feet for the three hundred barrels of coal, with which Hyde testified she was loaded when she drew thirteen feet, making six or seven feet difference when her coal would have been burned.

Cross-int. 35. Would the weight of the coal necessarily affect the depth of immersion of the stern only, or would it affect also the bow, or would that depend upon where in the boat the coal was stored; and do you know, or does the evidence inform you, where the coal was stored?

Ans. If kept in the coal-bunkers, where such bunkers are commonly located, it would affect the depth of the stern, and as the coal was consumed the stern would sink still deeper and the bow rise still higher, for the reason that the machinery and tank were located in the stern of the vessel. The evidence does not inform me as to the location of the bunker, but I suppose the three hundred barrels of coal before referred to was for her own use and not as freight.

Cross-int. 36. You state in answer to Int. 8, that the stern of the Enoch Train being sunk six or seven feet more than it would be
292 were she on an even keel, "the bow, therefore, must have been raised out of water a corresponding number of feet." How many feet would the bow be raised?

Ans. An equal number of feet.

Cross-int. 37. On what principle of physics do you base your opinion that, in the case of a boat floating and immersed in the water, when one end is depressed a given number of feet the other end will be raised the same number of feet?

Ans. From the principle of an ordinary scale beam, where the preponderance of weight is at one end and no counterpoise at the other, a vessel in her displacement in water being exactly similar in her operation and movement.

Cross-int. 38. Has not an ordinary scale beam, an immovable centre of motion or fulcrum? Is that true of a boat in the case supposed, and in your opinion as an expert does that fact make a difference?

Ans. In the scale beam referred to the two extremities are supposed to be, and ought to be, exactly equidistant from the fulcrum, which fulcrum exactly corresponds to the centre of motion of a vessel on or in the water, said motion being due to the preponderance of weight as applied to either end. No such fact exists in a vessel so described, the slightest preponderance moving her on the fulcrum.

Cross-int. 39. Where, in a boat floating in the water, is the point which you call the centre of motion, which corresponds to what you call the fulcrum of an ordinary scale beam?

Ans. That would depend on the model of the vessel and can only be ascertained by an accurate estimate of her displacement in the water. It generally occurs in well modelled vessels at about the point of the greatest width or displacement. But hardly two ships are alike in that respect; though built after the same model, still there will be some slight variation.

Cross-int. 40. Whether or not the bow will rise out of the water the

same number of feet that the stern is immersed in the water (an even keel being the standard) would depend, would it not, upon where what you call the centre of motion might be?

Ans. It would, unless counteracted by weight at the opposite end

293 Cross-int. 41. Do you know where in the Enoch Train the point which you call the centre of motion was?

Ans. I do not.

Cross-int. 42. What is the meaning of the term "even keel," as used in the description of the letters patent in this case and as used by you in your evidence?

Ans. It is a term used in the patent to designate the manner in which she can be lowered, if desired. The same term is used to indicate the fact that she is thereby enabled to be tipped at either end, as desired. For if she could not be made to sink on an even keel, both ends could not be controlled. When on an even keel both ends of the boat are immersed equally in the water.

(Defendant's counsel notices a motion to strike out all the answer except the last sentence.)

Cross-int. 43. Do you not mean by an even keel that the plane of the keel is parallel with the plane of the surface of the water?

Ans. It may be so when so used and lowered.

Cross-int. 44. If the boat is not so lowered is she on an even keel?

Ans. No.

Cross-int. 45. Within your experience have you ever seen an ordinary tug-boat floating in the water the plane of the keel of which was exactly parallel with the plane of the surface of the water? If you have, did you ascertain and verify the fact?

Ans. I have, by comparing the mark in feet and inches marked on the stern-post and stem.

Cross-int. 46. When was that?

Ans. When I have been superintending construction and repairs, and in the management and running of such boat.

Cross-int. 47. Where in the patent do you find a suggestion that a boat, constructed according to the description contained in it, can, should, or may be tipped at either end? Read the reference.

Ans. In the copy of the patent contained in record, page 9, as follows: "All the engines may be driven by one set of boilers, F, placed midships. In order that the mud-fan may be brought in contact with the bottom, I construct the boat with a series of water-tight com-

294 partments, E, placed in the bow and stern, and on each side of the centre, amidships, into which the water may be permitted to flow through pipes, so as to sink the vessel to the required depth, the compartments being so placed and proportioned that the vessel shall sink with an even keel, by which the effective action of the mud-fan, the propellers, and the steering apparatus is preserved, the boat being manageable at any depth. A large pump, B, driven by the engine, is connected by pipes with all the compartments, so that the water may be pumped out when necessary to raise the boat. I am aware that boats have been constructed with compartments to be filled with water, to sink the dredging mechanism to the bottom by loading the end of the boat in which such mechanism is placed; but this construction is subject to the disadvantage of requiring more complicated machinery for dredging, in order that it may be accommodated to the inclination of the boat, and to the further disadvantage that the boats thus inclined are comparatively unmanageable. What I claim as my invention, and desire to secure by letters patent, is—

"1. A dredging-boat constructed with a series of water-tight compartments so proportioned and arranged that, as they are filled with water, the boat shall preserve an even keel, and the dredging mechanism be brought into action without any adjusting devices, substantially as set forth.

"2. The combination of the 'mud-fan' attached to the shaft and a boat containing a series of water-tight compartments, E, so adjusted as to cause the boat to settle on an even keel as the compartments are filled with water, and a pump, B, for exhausting the water from all the compartments, substantially as set forth."

Cross-int. 48. Did you ever build or see operating a boat constructed according to the specification of your patent? If yea, when, where, and her name?

Ans. Only the model filed with my patent in the Patent Office.

Cross-int. 49. Then, your opinion that a boat so constructed could operate on an even keel is matter of theory only, and not actual experience?

Ans. It is not a matter of theory, but a matter of twenty-five years of experiment and actual work on contracts for dredging.

295 Cross-int. 50. Did you ever see a dredge-boat operating on an even keel? If yea, when, where, and her name?

Ans. I have not.

Direct examination resumed:

Int. 14. Please refer to your answer to the eighth direct interrogatory, wherein you state, "In operating the Enoch Train her stern was always sunk six to seven feet more in the water than it would be were she on an even keel. The bow, therefore, must have been raised out of water a corresponding number of feet;" also to your answer to thirty-fourth cross-interrogatory, and state whether you wish to make any correction or explanation of the same.

Ans. I do. In using the words "equal number of feet" I made no allowance for the leverage which corresponds to weight in the forward length of the vessel as it was raised out of water. It would not be, strictly speaking, a corresponding number of feet.

Int. 15. In a double-propeller tug-boat, such as the Enoch Train, how does the lowest point of the rudder compare with the lowest point of the propellers, as to their depth in or their distance below the surface of the water?

Ans. The lowest point of the rudder would be lower than the lowest point of the propeller, especially with twin screws, as the Enoch Train is described to have been.

Int. 16. Suppose the Enoch Train to be operating as a dredge-boat, as described by the defendant's witnesses, already referred to in this deposition, and suppose the stern to be lowered but three or four feet, and the bow not to be elevated at all, while operating in the mud in that position, state whether the rudder could be used for the purpose of guiding or directing or regulating the boat.

Ans. It could not.

Int. 17. In the extract taken from your patent, given me in answer to the forty-seventh cross-interrogatory, I notice this language: "The compartments being so placed and proportioned that the vessel shall sink with an even keel;" also the following: "A dredging-boat, constructed with a series of water-tight compartments so proportioned and arranged that, as they are filled with water, the boat shall pre-

296 serve an even keel;" also this: "A series of water-tight com-

partments, E, so adjusted as to cause the boat to settle on an even keel as the compartments are filled with water." Please state whether the mechanism and arrangements in your patented dredge-boat, as shown by the drawings forming part of the patent already introduced in this case, are such that all of the tanks may be filled with water, or some of them filled and others partially filled, at pleasure.

(Defendant's counsel objects to this question, as not within the rule, and also as incompetent, because there is no suggestion on the drawings or in the specification of the fact, if it be a fact, inquired for, and that the evidence is immaterial.)

Ans. The mechanism and arrangements in the patented dredge-boat, as shown by the drawings forming part of the patent already introduced, do show such an arrangement.

Int. 18. Please state whether it would be apparent to a practical builder of propeller-boats, upon reading the specification and claims in your patent, that your patented dredge-boat could be lowered by the contrivances described in your patent, not only on an even keel, but with either end lower than the other, as might be desired.

(Objected to, as incompetent, immaterial, and leading.)

Ans. It would be very apparent to almost any one acquainted with vessels.

Cross-examination resumed:

Cross-int. 51. In your answer to redirect int. 17 to what drawings did you refer, and to what drawings did you understand the question to refer?

Ans. To the drawings attached to the patent.

(Defendant's counsel moves to strike out answer to int. 17, on the ground that the reference is to a drawing which is not now here for the purposes of cross-examination.)

Cross-int. 52. Look at Exhibit B[1] and say where there is a suggestion on that drawing that the boat, or any boat constructed like it, can or should be tipped at either end while operating or idle.

Ans. The various location and arrangements of the water compartments shown in the drawing would indicate to any practical person that the boat could be tipped at either end or lowered on even keel.

297,298 Cross-int. 53. Do you mean by "various location and arrangements," the placing of tanks at each end of the boat?

Ans. I mean to include all tanks.

(Question repeated.)

Ans. Not separately, no; but in combination as set forth in the patent and allowed in the claim of the patent, and defined therein as a system of water compartments.

Cross-int. 54. Does not the patent require, in a boat constructed according to it, that the compartments shall be so placed and proportioned that the vessel shall sink with an even keel?

Ans. Not strictly, but only if so desired, that the fact, that she can be so lowered controlling the fact, at either end can be tipped.

Cross-int. 55. Point out, in the description of the patent, any suggestion that the vessel should be built so that it can be tipped at either end, and limit yourself to answering the question.

Ans. The words "series of water-tight compartments" would so indicate and suggest to any practical person, and the filling with water and exhausting the water from the same would so indicate.

Cross-int. 56. Does not the patent disclaim an arrangement of tanks by which the end where the mechanism is should be sunk only, and

does not the patent say that sinking the dredging end of the boat alone is a disadvantage?

Ans. The disclaimer in the patent refers to boats that can be sunk at one end only, and not to boats arranged with tanks so as to lower either end. The word "dredging end" does not occur in the disclaimer.

Cross-int. 57. Did you ever testify as an expert in a patent cause before testifying yesterday in this cause?

Ans. I have not.

EDWIN L. BRADY.

Attest:
JAMES T. F. RANDOLPH,
Examiner.

299 The following is the opinion of the court, in accordance with which the decree for complainant for an account and for reference to a master was entered in this cause on the twenty-ninth day of September, A. D. 1876, namely:

Circuit court of the United States, district of Massachusetts. In equity.

EDWIN L. BRADY
v.
THE ATLANTIC WORKS. } No. 15.

Opinion of the court.—September 29, 1876.

CLIFFORD, J.

Inventions secured by letters patent are property in the holder of the patent, and, as such, are as much entitled to protection as any other property consisting of a franchise during the term for which the franchise or exclusive right or privilege is granted. Seymour v. Osborne, 11 Wall., 533.

Holders of letters patent enjoy by virtue of the same the exclusive right and liberty of making and using the invention therein secured, and of vending the same to others to be used, as provided by the act of Congress passed for the purpose. 16 Stat. at Large, 201.

Private property, the Constitution provides, shall not be taken for public use without just compensation, and it is clear that that provision is as applicable to the government as to individuals, except in cases of extreme necessity, in time of war, and of immediate and impending public danger. Exigencies of the kind do arise where the prohibition does not apply to the public, and, in such cases, it must be conceded that the officer in the public service is not a trespasser, but it is
300 equally true that the government is bound to make full compensation to the owner. Mitchel v. Harmony, 13 How., 134; U. S. v. Russell, 13 Wall., 627.

Letters patent for a new and useful improvement in the construction of boats for dredging under water were granted to the complainant on the seventeenth of December, 1867, as appears by the original patent annexed to the bill of complaint. Nothing is suggested to show that the patent is not regular in form, and the complainant alleges that the respondents are making and constructing a dredge-boat of the same construction as that described in his specification, and which is an infringement of his patent, and he prays for an injunction, and for an account of all such gains and profits as they, the respondents, have received by their unlawful and wrongful acts and doings.

Proofs were taken, and hearing was had, when the respondents requested leave to amend their answer. Leave to that effect having been granted, and new proofs taken, the cause is now submitted, with additional briefs, to the court upon the pleadings as amended, with all the proofs in the cause. Redress for the unlawful use of a patent cannot be obtained unless the party seeking it alleges and proves that he is the original and first inventor of the improvement, and that the patent has been infringed by the party against whom the suit is brought. Both of those allegations must be proved, but it is well-settled law that the patent, if regular in form, and introduced in evidence, affords a prima facie presumption that the alleged inventor is the original and first inventor of what is therein described as his improvement. Apply that rule to the case before the court, and it is clear that nothing is open for examination except the question of infringement and the defences set up in the answer. Seymour v. Osborne, 11 Wall., 538.

301 Considered together, the answer and the amendments thereto may be regarded as setting up the following defences:

1. That the complainant is not the original and first inventor of the improvement.

2. That M. D. McAlester furnished the plans and sketches of the described dredging-boat, and that he was the real inventor of the improvement; that the said McAlester was the sole inventor of the same, and that the complainant fraudulently, wrongfully, and falsely represented himself as the original inventor, and that the patent was wrongfully and inadvertently issued in ignorance of the facts, and is wholly inoperative and void.

3. That the dredging-boat in question was built and completed under the inspection and supervision of an officer of the United States, according to the plans and specifications furnished by the Government of the United States; and that the said plans and specifications were the result of the said officer's own study, observation, and experience, and that to the extent that said plans and specifications were original in any particular, he was the author and inventor of the same.

Superadded to that, the respondents also allege that, in building the said dredging-boat, and in following the said plans and specifications, they were the mere agents and executive hand of the Federal Government, which was the real constructor of the same, all the work thereon having been done under the immediate supervision and in obedience to the orders of the said government, and in conformity with the plans, specifications, and directions "which the said government furnished."

Two claims are set up by the patentee:

1. A dredging-boat constructed with a series of water-tight compartments so proportioned and arranged that, as they are filled with water, the boat shall preserve an even keel and the dredging mechanism be brought into action without any adjusting devices.

302 2. He claims the combination of the "mud-fan" attached to a rigid shaft and a boat containing a series of water-tight compartments so adjusted as to cause the boat to settle on an even keel as the compartments are filled with water, and also a pump for exhausting all the water from the compartments.

Reference is made to the drawings as making part of the specifications, and the patentee states that the excavator consists of a strong boat, propelled by one or two propellers placed in the stern. Two propellers are preferred, as affording greater power and rendering the boat more manageable when steering in crooked channels. Steam engines of ordinary construction are employed to drive the propeller in

the usual manner. Near the bow of the boat is placed another steam-engine, to drive what the patentee calls the "mud-fan," which projects from the bow of the boat, and in front of the same, and is formed by a set of revolving blades, turned like those of the propellers, by a shaft passing through what is called a stuffing-box in the specification. The blades for this purpose are shaped somewhat like those of a propeller, but the patentee states that they are sharper on their fronts and less inclined on their face. These blades, he says, should extend about two feet below the bottom of the boat, their object being to displace the sand and mud on the bottom by their rapid revolution, and by stirring them up to mix the same up with the water, so that they may be carried off by the current; to which he adds that the "mud-fan" assists the propellers to draw forward the boat as well as to stir up the mud and sand. All the engines, it is represented, may be driven by one set of boilers, placed midships; and in order that the "mud-fan" may be brought in contact with the bottom, the patentee states that he constructs the boat with a series of water-tight compartments, placed in the bow and stern and on each side of the centre, midships, into
303 which the water may be permitted to flow through pipes, so as to sink the vessel to the required depth, the compartments being so placed and proportioned that the vessel shall sink with an even keel, by which the effective action of the "mud-fan," the propellers, and the steering apparatus is preserved, leaving the boat manageable at any depth of water. Such is the general description of the boat, to which it is added that a large pump, driven by the engine, is connected by pipes with all the compartments, so that the water may be pumped out when necessary to raise the boat. Argument to show that the invention was designed as an improvement in constructing a dredging-boat, and the apparatus to render such a boat an effective machine for that purpose, is unnecessary, as the proposition is supported by every line of the descriptive part of the specification.

Two suggestions are made as tending to show that the complainant was not the original and first inventor of the improvement.

1. That its construction and mode of operation are the same as the dredge-boat Enoch Train, previously constructed and publicly used in 1859 for the purpose of deepening the channel at the mouth of the river Mississippi.

2. That Gen. M. D. McAlester made the original plans and specifications described in the patent, and that he is the author and inventor of whatever is new and useful in the patented improvement.

Much discussion of the first suggestion is unnecessary, as it is quite clear that the evidence introduced by the respondents is not sufficient to show that the Enoch Train embodied the same construction and mode of operation as the patented improvement. Instead of that the clear inference is that it did not, and, of course, it is not sufficient to overcome the prima facie presumption that the patentee is the original and first inventor of what is secured to him by his patent. Nor is the
304 proof introduced to support the second suggestion sufficient to warrant a finding either that the person named made the plans and specifications or that the complainant surreptitiously obtained the patent. Allegations, like those in the answer, that the plans and specifications were furnished by the agent of the government, and that the agent named was the inventor of the improvement, require to be proved before it can be admitted that they constitute a valid defence to the charge of infringement. They are not proved in the case before the court, and consequently the defence must be overruled. Both proposi-

tions, therefore, are rejected, and the finding of the court on both of those points is in favor of the complainant. Suppose that is so, still the respondents insist that they worked under the Federal Government, and that the nature of a patent right is such that the sovereign power may use it at pleasure, or authorize third persons to use it for the public benefit. Support to that view is certainly found in the authority cited by the respondents, and perhaps it may be assumed that such is the rule in the parent country. (Feather v. Queen, 6 Best & Smith, 283.)

By that case it is decided that the patent prohibits all of the subjects of the sovereign except the patentee from using the invention, but that it extends no further, and is not intended to deprive the government itself of the use of the invention. Patents in that country are monopolies, granted by the sovereign, and may be granted or refused in the royal discretion. Power to legislate upon the subject in this country is conferred upon Congress by the Constitution, by securing for limited periods to inventors the exclusive right to their discoveries. Congress has legislated, and the provision is that the persons who have made inventions of the kind specified in the twenty-fourth section of the patent act may "obtain a patent therefor." (16 Stat. at Large, 201.)

305 Every patent shall "contain a grant to the patentee, his heirs, or assigns, for the term of seventeen years, of the exclusive right to make, use, and vend the said invention or discovery throughout the United States." (Sec. 22, p. 201.) Language so explicit and unambiguous admits of no exception, even if it would be competent for Congress to reserve such a right to the government. Such an exception is not made and cannot be implied. Conclusive support to that proposition is found in a recent decision of the Supreme Court (U. S. v. Burns, 12 Wall., 252), where the court say, speaking of an invention made by an officer of the United States, and secured by letters patent, that "the government cannot, after the patent is issued, make use of the improvement any more than a private individual, without license of the inventor or making compensation to him." Nothing can be plainer than that proposition for two reasons: 1. Because the invention, when thus secured, is property, and as such is entitled to the same protection as any other property. 2. Because private property cannot be taken for public use without just compensation except in cases of extreme necessity, in time of war, or of immediate and impending public danger. Nothing of the kind is shown in this case, and of course the case falls directly within the prohibition.

Sufficient appears to warrant the conclusion that the respondents were employed by the government to build a dredge-boat, but contractors of the government derive no power in a case like the present, by virtue of their contract, to take the property of private individuals without their consent, and to use and apply the same in fulfilling their contract obligations. Such a contractor may be the agent of the government to build a ship or dredge-boat, but he is not the agent of the government to seize and appropriate whatever materials he may select to fulfill his obligations. Infringement is impliedly admitted, and

306 the other defences set up in the answer are overruled. Were infringement not admitted, still the proofs are sufficient to sustain the bill of complaint, which is all that need be said upon the subject.

Decree for an account. The question of an injunction is deferred for further consideration.

307 The following is the opinion of the court in accordance with which the final decree for complainant was entered in this cause on the ninth day of October, A. D. 1878, namely:

Circuit court of the United States, district of Massachusetts. In equity.

EDWIN L. BRADY
v.
THE ATLANTIC WORKS. } No. 15.

Opinion of the court.—October 9, 1878.

CLIFFORD, J.

Gains and profits are the proper measure of damages in equity suits, except in certain cases where the injury sustained by the infringement is plainly greater than the aggregate of what was made by the respondent. Examples of the kind may be mentioned as falling within the exception where the business of the infringer was so improvidently conducted that it did not yield any substantial remuneration beyond expenses, and cases where the products of the patented improvement were sold by the infringer greatly below their just and market value in order to compel the owner of the patent, his assignees and licensees, to abandon the manufacture of the patented product. (Birdsell v. Coolidge, 3 Otto, 69.) Redress was sought by the complainant at a preceding term for the infringement of a patent granted to him for a new and useful improvement in the construction of boats for dredging under water, as more fully set forth in the prior opinion of the court. Hearing was had,
and the court entered a decretal order in favor of the complain-
308 ant and sent the cause to a master to compute and report the amount of the profits made by the respondents. Due report was made by the master, with the exceptions of each party to the same, which are the subject of the present investigation.

Exceptions of a general character taken by the complainant are three:

1. Those that relate to allowances made by the master for general expenses, of which there are five in number.

2. Extra charges were allowed by the master to the respondents for work done and materials furnished in constructing the dredge-boat, to which the complainant excepted.

3. Interest was not allowed by the master upon the sum reported as profits, and the complainants excepts to the ruling of the master in that regard:

1. Complainant's exceptions as to the general expenses of their business, properly chargeable to the same, in the construction of the dredge-boat. Such expenses both parties agree should be allowed, but they differ widely as to the mode in which they should be computed and ascertained. Difficulty it seems attended the investigation, and the master took the calendar year or years in which the work was done, to which the complainant objected and insisted that the calculation should only cover such portion of such year or years in which the respondents were actually engaged on the work. Had the complainant's theory been adopted by the master, the calculations would have been much more intricate and embarrassing, nor had he before him the requisite statistics to enable him to follow and verify the theory. Profits, beyond all doubt, is the proper measure of compensation in this case, and it is equally certain that the burden of proof is upon the complainant to show what the amount is that he is entitled to recover.

Masters charged with that duty may examine the respond-
309 ent and if necessary inspect his books, but it is incumbent upon the complainant to furnish proof of whatever else is necessary to enable the master to make the proper computation. Actual

profits made by the infringement of the invention secured by the letters patent are the profits which the complainant is entitled to recover, excluding those made in the construction of such portions of the infringing machine as are not embodied in the patented mechanism. Viewed in the light of those suggestions, it does not seem necessary to give each of the five exceptions touching the allowances for general expenses a separate examination. Matters in dispute are chiefly questions of fact, in respect to which it will be sufficient to say that the whole report in respect to the five exceptions has been carefully reviewed, and the court is of the opinion that the five exceptions upon that subject must be overruled. Expenses of the kind are such as are incurred in the conduct of business for the benefit of the same in all its branches, and not properly chargeable to any one particular branch of the same. They are incurred for the maintenance of the entire business, and not in the interest of any one part of it above another, but are necessary, convenient, or customary for all, and therefore are properly apportionable to the several branches of the business when the profits of either are to be separately stated. (Hitchcock v. Tremaine, 9 Blatch., 386; The Tremolo Patent, 23 Wall., 528.) Tested by the principle there laid down, it is clear that all these expenditures were properly allowed, as they were needful for all the undertakings, and were incurred for the benefit of all.

2. Extras charged being actual expenditures were properly taken into the account by the master, and the exception is accordingly overruled.

3. Interest on profits was properly refused. Such a charge was allowed by the circuit court in Silsby v. Foote, 20 How., 387, for
310 which ruling the decree of the circuit court was reversed. (Mowry v. Whitney, 14 Wall., 653.) Argument upon that subject is unnecessary, as the question is definitively settled by the decisions of the Supreme Court. (Littlefield v. Perry, 21 Wall., 229.)

Certain exceptions are also taken by the respondents to the report of the master, which deserve a brief consideration. Charges for extra work and materials furnished were allowed in the account of the respondents, in consideration of which the master required the respondents to assign the charges for the same to the complainant. Enough appears to show that the arrangement was an equitable one, and that the reasons given in support of it are entitled to prevail. Respondents' exceptions 2 and 3 are overruled, for the reasons given by the master, without further discussion. (Tool Co. v. Norris, 2 Wall., 54; Trist v. Childs, 21 id., 450.) Nor is any discussion necessary to support the ruling of the master which is the subject of complaint in the fourth exception of the respondents. His reasons are sound and well supported. (Rubber Co. v. Goodyear, 9 Wall., 803.)

Exceptions of both parties overruled. Master's report confirmed.

311 UNITED STATES OF AMERICA,
Massachusetts District, ss:

I, John G. Stetson, clerk of the circuit court of the United States for the first circuit and district of Massachusetts, certify that the foregoing is a true copy of the record and of all proceedings in the cause of Edwin Brady, complainant, v. The Atlantic Works, defendant, in said circuit court determined; including the two opinions of the court in said cause, delivered respectively on the twenty-ninth day of September, A. D. 1876, and on the ninth day of October, A. D. 1878, as appears by the record in said cause.

In testimony whereof I hereunto set my hand and affix the seal of said circuit court at Boston, in said district, this seventeenth day of September, in the year of our Lord one thousand eight hundred and seventy-nine, and of the Independence of the United States the one hundred and fourth.

[SEAL.] JOHN G. STETSON, *Clerk.*

312 UNITED STATES OF AMERICA,
Massachusetts District, ss:

At a circuit court of the United States, begun and holden at Boston, within and for the district of Massachusetts, on Thursday, the fifteenth day of May, in the year of our Lord one thousand eight hundred and seventy-nine.

Before the honorable Thomas L. Nelson, district judge.

EDWIN L. BRADY, COMPLAINANT,
v.
THE ATLANTIC WORKS, DEFENDANTS. } In equity.

This cause was determined in this circuit court at the May term thereof A. D. 1878, on the ninth day of October, A. D. 1878, by a decree
313 in favor of the complainant against the defendants for the sum of six thousand six hundred and four dollars and eighty-two cents ($6,604.82), as and for the profits which the defendants have received or which have arisen or accrued to them from the infringement complained of in the bill of complaint in this cause as found by the master in his amended general finding; and the further sum of one thousand six hundred and twenty-three dollars and forty-nine cents ($1,623.49) costs of suit. From this an appeal was taken by the defendants by direction of a department of the Government of the United States and allowed as of said ninth day of October, A. D. 1878. And now, at this present May term of this court, A. D. 1879, on the ninth day of October, A. D. 1879, the honorable Nathan Clifford, associate justice, sitting, comes the said complainant and claims an appeal from said decree and gives good and sufficient security that he will prosecute his said appeal to effect, and answer all damages and costs if he fails to make his plea good, which security is accepted by the court, and said appeal
314 is thereupon allowed by the court.

A true record.

Attest:

JOHN G. STETSON, *Clerk.*

315 UNITED STATES OF AMERICA,
Massachusetts District, ss:

I, John G. Stetson, clerk of the district court of the United States for the district of Massachusetts, in the first judicial circuit, certify that the foregoing is a true copy of the record of further proceedings upon the appeal of complainant in said circuit court at the May term, A. D. 1879, in the cause in equity entitled Edwin L. Brady, complainant, v. The Atlantic Works, defendants, determined in said circuit court at the May term, A. D. 1878.

In testimony whereof I hereunto set my hand and affix the seal of said circuit court, at Boston, in said district, this eleventh day of October, A. D. 1879, and of the Independence of the United States the one hundred and fourth.

[SEAL.] JOHN G. STETSON, *Clerk.*

316 Know all men by these presents that we, Edwin L. Brady, of Stamford, Fairfield County, in the State of Connecticut, as principal, and William A. Abbott and William R. Eadie, both of the city, county, & State of New York, & John S. Abbott, of Watertown, Mass., as sureties, are held and firmly bound unto the Atlantic Works, a corporation organized and existing under the laws of the Commonwealth of Massachusetts, and having its usual place of business in Boston, in said Commonwealth, in the full and just sum of five hundred dollars, to be paid to the said Atlantic Works, its certain attorneys, successors, or assigns; to which payment, well and truly to be made, we bind ourselves, our heirs, executors, and administrators, jointly and severally, by these presents.

Sealed with our seals, and dated the 3d day of October, in the year of our Lord one thousand eight hundred and seventy-nine.

Whereas lately at a circuit court of the United States within and for the district of Massachusetts, in a suit in equity depending in
317 said court between said Edwin L. Brady, complainant, and said Atlantic Works, defendant, decree was rendered against the said Atlantic Works, and the said corporation having obtained an appeal to remove the said cause to the Supreme Court of the United States to reverse the decree in the aforesaid suit, and a citation directed to the said Edwin L. Brady, citing and admonishing him to be and appear at a Supreme Court of the United States, to be holden at Washington, on the second Monday of October current, and the said Edwin L. Brady having also obtained an appeal to remove the said cause to the Supreme Court of the United States to reverse in part the decree in the aforesaid suit, and a citation directed to the said Atlantic Works citing and admonishing the said corporation to be and appear at a Supreme Court of the United States, to be holden at Washington, on the second Monday of October current:

And the condition of the above obligation is such that if said Edwin L. Brady shall prosecute his said appeal to effect, and answer all
318 damages and costs if he fail to make his plea good, then the above obligation to be null and void; otherwise to remain in full force and virtue.

EDWIN L. BRADY. [L. S.]
WILLIAM A. ABBOTT. [L. S.]
WILLIAM R. EADIE. [L. S.]
JOHN S. ABBOTT. [L. S.]

Signed, sealed, and delivered in presence of—
J. T. T. RANDOLPH,
GEORGE P. SANGER,
Witness to John S. Abbott.

Approved.

NATHAN CLIFFORD,
Associate Justice of the Supreme Court of the United States.

A true copy of the bond taken by the judge at the time of allowing the appeal named in said bond, which bond is on file in the office of the clerk of the circuit court of the United States for the first circuit and district of Massachusetts.

Attest:

JOHN G. STETSON,
Clerk U. S. C. C., Mass. Dist.

319 The United States of America to the Atlantic works, a corporation duly existing under and by the laws of Massachusetts, greeting:

You are hereby cited and admonished to be and appear at a Supreme Court of the United States, to be holden at Washington, on the second Monday of October current, pursuant to an appeal filed in the clerk's office of the circuit court of the United States for the district of Massachusetts, in the cause lately determined in the said circuit court wherein Edwin L. Brady is complainant and you are defendant from which decree said complainant appeals, to show cause, if any there be, why the said decree should not be reversed, and why speedy justice should not be done to the parties in that behalf.

Witness the honorable Nathan Clifford, associate justice of the Supreme Court of the United States, this ninth day of October, in the year of our Lord one thousand eight hundred and seventy-nine.

NATHAN CLIFFORD,
Associate Jus. Sup. Court of the U. S.

Due and sufficient service of the above citation is hereby acknowledged.

GEORGE P. SANGER,
U. S. Att'y.

(Indorsement on cover:) No. 101. The Atlantic Works, appellant, vs. Edwin L. Brady. No. 102. Edwin L. Brady, appellant, vs. The Atlantic Works. Massachusetts C. C. U. S. Filed 18th October, 1879.

OFFICE SUPREME COURT U.S.
FILED
NOV 4 1882
JAMES H. McKENNEY, Clerk.

17-192

Supreme Court of the United States

THE ATLANTIC WORKS,

Appellants,

vs.

EDWIN L. BRADY,

Respondent.

No. 101—IN EQUITY.

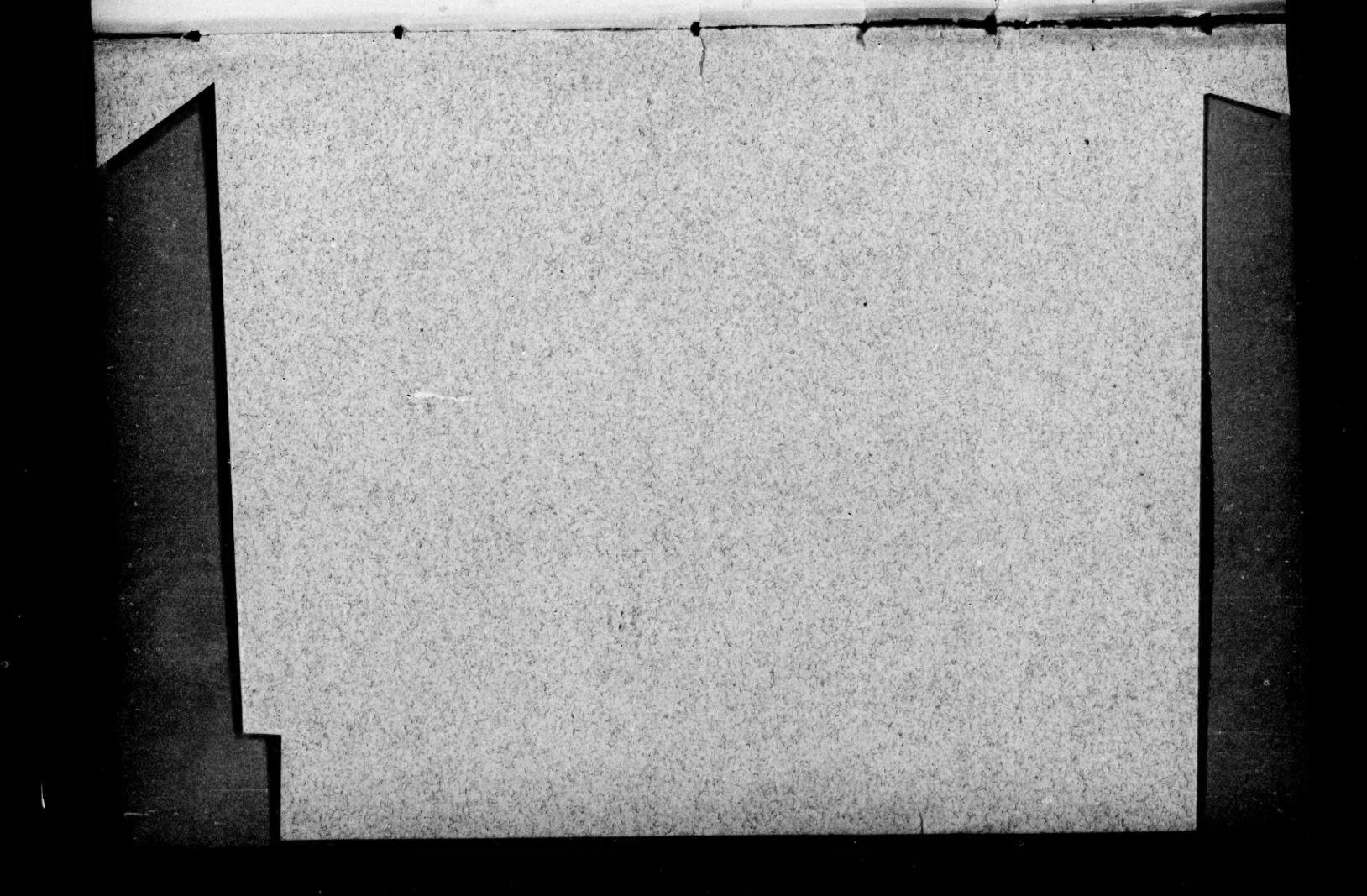
BRIEF FOR RESPONDENT.

WILLIAM A. ABBOTT,

ALBERT A. ABBOTT,

Counsel for Respondent.

WM. A. LEONARD, PRINTER,
No. 179 GREENWICH STREET, NEW YORK.
1882.



Supreme Court of the United States.

THE ATLANTIC WORKS,
Appellants,
vs
EDWIN L. BRADY,
Respondent.

No. 101
IN EQUITY.

BRIEF FOR RESPONDENT.

STATEMENT.

This suit was commenced in the Circuit Court, April 9, 1868, by Bill filed by Edwin L. Brady, the respondent, on Letters Patent No. 72,360, dated Dec. 17, 1867, for improved dredge boat.

The Bill charged that the Atlantic Works, the appellants, were infringing the said patent, and prayed for an injunction and an account of the profits received from the use of the invention patented, and a decree for such profits.

The answer was filed March 15, 1869, and the defendants therein set up defences, in substance, as follows:

1. That the complainant is not the original and first inventor of the improvement.

2. That M. D. McAlester was the real inventor, and that the complainant falsely represented himself as the original inventor.

3. That the dredging boat in question was built by defendants under the inspection and supervision of an officer of the United States, according to certain plans and specifications furnished by the Government, and that the said plans and specifications were the result of said officers' own study, observation and experience, and that, to the extent of said plans and specifications being original, he was the author and inventor of the same, and that said officer was said McAlester.

4. That the defendants, after the Government had advertised for proposals for building of a dredge boat for the mouth of the Mississippi River, submitted proposals which were accepted by defendants, and that the defendants contracted to build the dredge boat according to plans and specifications furnished by the Government, and that the defendants were merely the agents of the Government, and that the Government was the real constructor of said boat.

5. That the principle of said boat had been known and publicly used before said patent; was not a new invention or novel or original, but had been used before in the "Enoch Train," a dredge boat claimed to have been used in the mouth of the Mississippi in the year 1864, as well as in the construction of the light-draft Monitors, so called.

An amended answer was filed August 17, 1869, and the defendants therein set up additional defences in substance as follows:

1. That the infringement complained of in the Bill had been substantially completed before this suit was brought, and that no further wrong was intended by the defendants, and that this suit is brought to recover for a past injury only.

2. That equity has no jurisdiction of this case.

A further amendment to answer was allowed on terms, July 18, 1876, and the defendant therein set up defences, in substance, as follows:

1. That the plans and specifications by which said dredge boat was constructed were not novel and original, but the same and the principle of said dredge boat had been known and publicly used before, to wit: at New Orleans, in the year 1859, in the boat "Enoch Train," by certain persons stated, and in the construction of light draft monitors, so called, built by the Government during the late rebellion, and long prior to said patent of said Brady or his caveat.

Replication to answer was filed April 5, 1869.

After proofs taken, a decree was rendered for the complainant September 9, 1876, and a reference ordered to a Master to take an account. After taking much testimony the Master reported, and on said report a final decree was entered, adjudging that the complainant recover of the defendant $6,604.82 profits, and $1,623.49 costs. (Printed transcript of Record, p. 69.)

The defendants appealed from this decree (p. 70).

The complainant also appealed (p. 19I).

Exceptions to the report were taken by the complainant (p. 66), and by the defendants (p. 68).

The final decree overruled the exceptions of both parties and confirmed the report.

The dredge boat built by defendants was built by them under contract with the United States. The contract provided that defendants * * "shall construct and "equip" * * * "at Boston, Mass., and deliver" * * * "at or below New Orleans, a dredge boat" * * * "for "$223,000." * * "That, on the completion of the dredge "boat" * * "a thorough trial of all its parts shall be "had" * * * "and the acceptance of the dredge boat "to take place on delivery at the place designated" * * * (pp. 41, 42).

On March 16, 1868, the defendants were paid $50,000 on said contract, and thereafter, between April 20, 1868,

and August, 14, 1868, various sums were paid which, with this first payment, made up the contract price for the boat (p. 15).

The boat was called the "Essayons," and Captain William H. A. Putnam took command of her at Boston, in June, 1868, when she left that port for New Orleans, arriving at the latter port about the middle of July, 1868 (p. 159). On the 21st day of December, 1876, the record shows that the United States District Attorney appeared in this suit on behalf of defendants, and, with other counsel, conducted the proceedings thereafter on the part of the defendants (p. 15).

The defence of this suit is assumed by the Government (pp. 30, 146).

The defendants appealed from the final decree by direction of the Department of Justice of the United States (p. 70).

A subpœna and a summons to show cause why injunction should not issue against defendants were issued on the filing of the bill, April 9, 1868, and served two days after. Affidavits upon the motion for an injunction *pendente lite* were filed, and on hearing the Court denied the motion (p. 40). The record does not give the date of the order denying the motion for the injunction, but it is sufficiently clear it was before the dredge boat left the port of Boston.

The appeal of the complainant is involved in No. 102. The appeal of the defendant will now be considered.

POINT I.

The Circuit Court had equity jurisdiction of this case.

a. Sec. 17 of the Act of 1836 provides that "all actions, "suits, controversies and cases arising under any law of "the United States, granting or confirming to inventors

" the exclusive right to their inventions or discoveries, " shall be originally cognizable as well in equity as at " law, by the Circuit Courts of the United States."

Imlay vs. The Norwich and Worcester R. R. Co., 4 *Blatch.*, 227.
Nevins vs. Johnson, 3 *Blatch.*, 80.
Gordon v. Anthony, 16 *Blatch*, 234.

Whether a suit for infringement of a patent shall first be tried at law is a matter of discretion, not of jurisdiction.

Cochrane vs. Deener, 94 *U. S.*, 780.

POINT II.

The United States Government has no right, at its pleasure and without the consent of the patentee, to use a patent, or to authorize third persons to use it for the public benefit.

Cons. U. S., Art. 1, §8.
Act of July 4, 1836.
United States v. Burns, 12 *Wall.*, 246.
James v. Campbell, 104 *U. S.*, 356.

a. No Government or public exigency is alleged or proved to justify the said appropriation or using of said improvement. The Court below said "Nothing of the " kind is shown in the case" p. 188.

POINT III.

No valid defence is shown by the connection of the defendants with the United States Government.

a. The defendant was simply a contractor to build the " Essayons" for the Government (answer, p. 8; amended ans. p. 11 and pp. 41, 188). Government contractors

have no right to seize property of private individuals without leave or license, and use it in fulfilling their contract obligations. This idea is very aptly expressed in Justice Clifford's opinion (p. 188).

b. The Government did not own or have any interest as owner in the "Essayons" at the time this suit was commenced. The boat was then being built, and had not been delivered to or accepted by the Government, and the Government had paid on the contract at that time only $50,000 of the contract price (p. 15, and see dredge boat contract, p. 41; testimony of Putnam, p. 159, *et seq.*)

c. After the motion for an injunction pending the suit had been denied, and the "Essayons" had left the jurisdiction of the Circuit Court and sailed to the mouth of the Mississippi, the Bill was simply for an account of the profits received by the defendant for the use of the invention and for a decree therefor. It is respectfully contended and claimed that the Government had no right or business to assume or have anything to do with the further defence of this suit, and that the appearance of the Government Attorneys then, and now, is simply an unwarranted intrusion, unless the Government is to be not only equitably but legally bound by the decision herein.

POINT IV.

The complainant was the original and first inventor of the invention described in his patent.

I. The appellants may claim (as at the hearing before Justice Clifford) that the invention described in Brady's patent was a matter of common knowledge and in common use before the date of Brady's invention, and that the testimony of Ephraim B. Bishop shows the use of substantially the same process by substantially the same means by boats on the Arkansas River in 1852 and 1853 (testimony of Bishop, p. 167).

In reply it may be stated:

a. That no such defence is set up, or even alluded to, in the answer, or in either of the amendments to the answer.

b. Neither in the answer nor the amendments is there any specification of or allusion to any particular boat or boats on the Arkansas River. Hence no evidence is admissible.

c. The proofs taken fail to establish any such claim.

d. No such facts exist of which the Court can take judicial knowledge as will tend to establish any such claim.

II. The appellants may claim, as before, that testimony taken on the part of defendants shows the use of the same method or process by the tug boat "Enoch "Train," in dredging the mouth of the Mississippi in 1859.

In reply, it may be stated:

a. That the only place where the defendants attempt to set up or to allude to any such defence is in the second amendment to their answer (p. 12), as follows: * * * "And the principle of said dredge boat had been sub- "stantially known and publicly used before, to wit: At "New Orleans, on the mouth of the Mississippi River, "in the year 1859, in the steam dredge boat 'Enoch "'Train,' by Charles H. Hyde, by Thomas G. Mackie "and William A. Hyde, copartners under the firm name "of Hyde & Mackie, and by Henry Wright." * * *

The respondent claims that this is no averment that the Enoch Train was used "on the mouth of the Missis- "sippi River," and that this phrase merely indicates what place is meant by "New Orleans," just as though the answer had stated, at New Orleans, in the State of Louisiana.

Even if under the averment in the answer, as amended,

that the Enoch Train was used at New Orleans, on the mouth of the Mississippi, proof is admissible of its use at Pass a'Loutre, 105 miles from New Orleans, and at the South-west Pass, 110 miles from New Orleans, the defence still fail on this point as well as the others.

A mere reading of a description of Brady's invention and of the Enoch Train method shows that Brady's principle was not that of the Enoch Train. See Brady's letters patent and specifications [copy attached to complaint] and drawings; also Justice Clifford's statement of Brady's invention, pp. 186, 187; also Nelson Curtis's description of the Essayons, pp. 126, 127, Ints. 8, 9, 10, 17, 18; and testimony of Brady, Ex. G^2, p. 124; G^1, p, 122, and pp. 93 and 94, touching G^2 and G^1.

The "Enoch Train" was originally a tug boat, built at Boston; then went to New Orleans as a tug boat. Then was extemporized for use temporarily at the bars of the mouth of the Mississippi River; then again a tug boat; then converted into a Confederate or rebel ram or gunboat, and as such destroyed (pp. 103, 104). At least such was the common report about her, which was not contradicted.

Testimony offered on behalf of the defendants shows that she had two propeller screws at her stern, and a tank on the stern to sink her. (See deposition of William A. Hyde, p. 172).

When the propellers were used she went at the mud or sand bar stern foremost. (Testimony of Capt. Wright, p. 170.)

The difference between the dredging method of the "Enoch Train," the Enoch Train being nothing more than any steamer or boat having a propeller in her stern and going at a sand bar or mud bank stern first, and Brady's invention is shown by the above referred to testimony about the Enoch Train, and the aforesaid descriptions and patent of Brady's invention, and by the

testimony of Brady himself, uncontradicted, touching the Enoch Train, on his cross-examination, as follows:

"Cross Int. 86. In what respect did she, when thus "used, differ from your patented boat, so far as your "patent goes?

"Ans. In every material respect, in not conforming to "the claim granted me in my patent, in not being able "to be lowered on an even keel, and tipping at only one "end, and having no agitating screw on the bow, and "for being objectionable in not being able to preserve "the water level over the flues of the boat, there being "great preponderance of water in one end of the boiler, "while there would not be sufficient water to cover the "flues at the other end of the boiler, and from the boat's "being excessively tipped at one end, bringing an undue "strain on the thrust bearing of the propelling shaft, due "in part to the excessive angle at which the periphery "of the propeller blade was brought against the mud, "causing a violent inward thrust when backing, and a "corresponding outward thrust when going ahead when "the propeller was in contact with the bottom, and in "not being under control of her rudder when her stern "was fast in the mud, and in not having any water com-"partments forward of her centre to be filled, should she "become fast in the mud aft, and it should be desired to "release her from her position." (Cross Int. 86, p. 104.)

A boat constructed on the principle of the "Enoch "Train" would be unmanageable when the deep or lower end of the boat touched the mud. Her rudder could not be used, and she would be subject to the action of the current. (Testimony of Brady, cross int. 63, p. 100).

Brady's invention claims:

"1. A dredging boat, constructed with a series of "water-tight compartments, so proportioned and ar-"ranged that, as they are filled with water the boat shall "preserve an even keel, and the dredging mechanism be

" brought into action without any adjusting devices, sub-
" stantially as set forth.

" 2. The combination of the 'mud fan' attached to a
" rigid shaft, and a boat containing a series of water-
" tight compartments, E, so adjusted as to cause the
" boat to settle on an even keel as the compartments are
" filled with water, and a pump, B, for exhausting the
" water from all the compartments, substantially as set
" forth." (Schedule annexed to letters-patent of Brady, copy on page 6, *et seq.*)

The description referred to in said claim embraces, in substance, among other things, a strong boat propelled by one or two propellers in the stern of the boat, and also a mud fan, or propeller, or agitator at the bow of the boat, and also a series of water-tight compartments in the bow and stern and on each side of the centre amidships into which the water may be permitted to flow through pipes so as to sink the vessel to the required depths; the compartments being so placed that the vessel shall sink with an even keel, by which the effective action of the mud fan, the propellers and the steering apparatus is preserved, the boat being manageable at any depth.

A comparison therefore of Brady's method and boat shows at a glance that the principle of Brady was not used or anticipated by the Enoch Train method.

Witnesses however testified on behalf of defendants giving evidence tending to show that the principles used in the Brady plan and the Enoch Train were substantially the same, and this testimony will be now briefly referred to. All of the depositions taken on part of the defendants, excepting Payne's, were taken in presence of defendants' counsel, and where no one could be present in behalf of the complainant. The depositions of Wright and Hyde were taken *de bene esse*. As the defendants were not restricted to the interrogatories exhibited to complainants' counsel, as they would have

been on commission, complainants' counsel had but a partial and slight opportunity for cross-examination of any whose depositions were taken in New Orleans. The advantage of such cross-examination, and the caution and scrutiny with which *ex parte* testimony should be received, are illustrated in the deposition of Payne. In his 79th and 82d answers (p. 139), and in the first sentence of his 80th answer, he states as of his own knowledge the construction and operation of the "Enoch "Train." But it appears from the latter part of his 80th answer (which was elicited by an oral question interjected by complainants' counsel), and from his answers to cross ints. 117 and 118, that he never had been on board of the Enoch Train, and never had seen her, and knew nothing about her except from hearsay.

Deposition of John Roy.

Complainants' counsel has no confidence in his testimony and no belief that he ever saw or had any knowledge of the "Enoch Train." In his answer to int. 35 (p. 152), Roy says: "I am positive that the first time I "ever heard about using a ship's propeller instead of "the conical screws sketched by Brady was from Gen- "eral McAlester."

He did not know McAlester 'till 1866, as it seems that McAlester was in Government employ in New Orleans, commencing early in 1866 (Deposition of Payne, int. 5, and deposition of Roy, cross int. 40). Yet Roy says, in answer to int. 33, that he "saw the 'Enoch Train'" working in the harbor at New Orleans in 1860, and the Enoch Train had nothing but her propellers to stir up the mud. He gives it his "opinion as an expert" that "so far as the dredging principle applied in each vessel "is concerned" the "Enoch Train" and the "Essayons" are "identical"; "but the Essayons had a rake in ad- "dition to the machinery used in the Enoch Train" (Int. 34).

Roy in affect states that the machinery used in the Enoch Train was the same as used in the Essayons, excepting a rake. The reliable evidence on both sides shows it was not the same, and that Roy had no accurate knowledge of the Enoch Train.

Roy is not shown to be an expert. He pretends that machinery operated by steam generally has been the study of his life (Int. 2). He says, in March, 1860, "I "was constructing architect of the new Custom House "in New Orleans" (cross int. 40, p. 153), and on being asked whether before the last civil war or rebellion he was not a stone and brick mason at New Orleans, answered: "As a part of my profession I superintended the laying "of stone and brick, and sometimes laid them myself" (cross int. 42, p. 153).

It therefore appears what Roy means by the term "constructing architect."

He went into the Rebel Army and was boss of some men engaged in building gun carriages for the Confederacy, and acted as captain of artillery at night. He was taken prisoner notwithstanding, and his house and other property were confiscated; but afterwards the property was restored to his wife by Judge Durell, and from the decree of Judge Durell the Government appealed, and the appeal was pending at the time Roy testified (cross int. 45, and answer pp. 153 and 154). Such being the pressure Roy was under to testify in behalf of defendants, his testimony is subject to grave suspicion.

Deposition of Henry Wright.

He states he was master of the Enoch Train during her dredging operations at the mouth of the Mississippi in 1859. "She was a double propeller; by a 'double "'propeller' I mean she had two screws at the stern, one "on each side of the stern post or quarter." "These "screws were the ordinary screws used by propellers "now." "We operated with her from sometime in May

"'till the later end of July—about three months." When asked to "describe the operation of dredging as "performed by the Train at that time" he answered, "We used to work our propellers in cutting up the mud. "The operation consisted of cutting through the mud "with our propellers. Sometimes we went at the mud "stern foremost, sometimes sideways, and sometimes "bows on." (Answer to int. 3, p. 170.)

He says he has examined the machinery and understands the mode of operation of the Essayons. "The "apparatus of the Essayons, and the way she operates, "are the same as those of the Enoch Train." "There "is no difference in the principle of their operations" (p. 171). Having been captain of a tow boat for eighteen years he seems to be regarded by the defence as an expert. The testimony on both sides is conclusive that the machinery in the Enoch Train and the Essayons is not identical nor substantially alike.

The testimony of Wright shows very conclusively that the Enoch Train was not a success as a dredge boat. She was made to go at the mud *stern first*, but instead of going at the mud that way Wright says she sometimes went at the mud sideways, and sometimes bows on. She undoubtedly went sideways when she went at the mud stern first, and became unmanageable by the current—her rudder being out of use.

Deposition of Thomas G. Mackie.

He did not see the Enoch Train till three months after she had finished her dredging at the mouth of the Mississippi, nor until she was employed in other service. (Answer to int. 5, p. 156, *et seq.*)

The answer to int. 6, on p. 157, is evidently hearsay. He never examined "the internal arrangements or ap-"paratus sufficiently to be able to speak of them" (int. 7, p. 157), but "in principle they were identical!"

What is such *ex parte* testimony as this worth even if repeated by a hundred witnesses?

DEPOSITION OF WILLIAM A. HYDE.

He describes the Enoch Train as "of burden between "three and four hundred tons, with two propeller screws "at her stern about nine feet in diameter each—one on "each quarter, or each side of the stern post." (Answer to int. 5, p. 172.)

It is thus shown that she was an ordinary double propeller.

"Before going to dredging on the bar, I fitted her up "with a water-tight apartment or tank at the stern by a "bulkhead running athwart ships, say about 20 or 25 feet from the stern." (Ans. to int. 6, p. 172.)

"There was a valve in the water-tight compartments "for letting the water into the hold of the vessel, from "which the water was pumped out by the steam pumps." (Ans. to int. 10, p. 172, *et seq.*)

No other changes were made in the Enoch Train.

"Some six months" before giving his deposition he "was shown through the Essayon's engines by the chief "engineer." Thinks he is familiar with her mode of operations, though "I have never seen her at work." (Ans. to int. 15, p. 173.)

He considers the "principle" of the Essayons and the Enoch Train the same, "although the construction of "the two boats is different in some respects." (Ans. to int. 16, p. 173.)

It may not be amiss to here re-state that, in order to determine that Brady's patent was not anticipated by the Enoch Train, it is only necessary to compare the Enoch Train, after having been changed to a dredge boat, with Brady's patented boat or with the Essayons, which is the same thing.

The Enoch Train was an ordinary double propeller, with her two propeller screws at her stern—one on each side of the stern post. The only change made was the insertion at her stern of a tank, containing two water-tight compartments, with a valve for letting the water in. She was worked with her stern to the mud. Her stern was sunk from 4 to 7 feet more than if she were on an even keel.

In backing her against the mud her rudder *must* have been thrust into the mud ahead of the screw; consequently the rudder would be useless, making it impossible to manage the vessel. The result was a failure, and the Enoch Train was abandoned as a dredge boat in about three months after the above change was made.

If such a dredge boat had any practicable value her use would have been continued, and other propellers would have been changed at small expense into dredge boats. Brady's patent, with its annexed drawings, show a dredge boat radically different in its construction, mode of operation and effect. The dredging mechanism itself is much more effective than the propellers of the Enoch Train, and the difficulty in managing the Enoch Train is entirely obviated by "a series of water-tight "compartments so adjusted as to cause the boat to settle "on an even keel as the compartments are filled with water." (Specification 2, Brady's patent, p. 7.)

Exhibit A[1] and Exhibit B[1], annexed to Brady's deposition, pp. 174 and 175, illustrates the difference between the Enoch Train and the patented boat. The Essayons was a success. She was in use from about the middle of July, 1868, till March 24, 1870, when Captain Putnam testified (p. 159), and how much longer does not appear.

The pretense that Brady's patented boat was anticipated by the Enoch Train is simply preposterous.

The testimony of defendant's witnesses that they are

" identical in principle of operation " is of no importance. What do they mean by " principle of operation ?"

They can mean nothing but this : " That the dredging " screw agitates the mud and throws it up into the surface current and the current takes it out." (Ans. to int. 5, p. 160.)

This is the only " principle " which is " identical " in the two boats, and has nothing to do with the invention. If it is true that the Essayons has been generally or always worked by sinking her dredging end more than the other, as stated in answer to int. 6, p. 165, such fact would have no bearing in this case.

The boat was constructed so as to be sunk with an even keel (answer to int. 18, p. 127), like complainant's patent; and it is immaterial whether other parties using her sunk her on an even keel or not.

Justice Clifford, upon the point whether the construction and mode of operation of Brady's patent are the same as the dredge boat Enoch Train, says that much discussion of this suggestion is unnecessary, " as it is " quite clear that the evidence introduced by the re- " spondents is not sufficient to show that the Enoch " Train embodied the same construction and mode of " operation as the patented improvement. Instead of that " the clear inference is that it did not, and, of course, it is " not sufficient to overcome the *prima facie* presumption " that the patentee is the original and first inventor of " what is secured to him by his patent " (p. 187).

III. The appellant may claim, as before, that Gen. M. D. McAlester made the original plans and specifications described in the patent, and that he is the author and inventor of whatever is new and useful in the patented improvement.

Justice Clifford, in his opinion, says, touching this point, " Nor is the proof introduced to support the second " suggestion sufficient to warrant a finding either that

" the person named made the plans and specifications or " that the complainant surreptitiously obtained the " patent. Allegations like those in the answer that the " plans and specifications were furnished by the agent of " the Government, and that the agent named was the in- " ventor of the improvement, require to be proved before " it can be admitted that they constitute a valid defence " to the charge of infringement. They are not proved " in the case before the Court, and consequently the de- " fence must be overruled " (p. 187).

The only evidence adduced by defendant to show that McAlester communicated such a plan to Brady as that patented prior to the application for patent, is the testimony of D. W. Payne, a military comrade of McAlester and a retainer of the Government, and there is no testimony that McAlester exhibited or mentioned such plan to any but these two before the application for patent by Brady.

Payne pretends that in the latter part of February, 1867, McAlester communicated such a plan to Brady in his presence. (Ans. to int. 18, p. 131, *et seq.*)

There is no evidence that McAlester, prior to the alleged conversation with Brady, had been engaged in devising plans for dredge boats, or that he communicated to any person theretofore any plan whatsoever for a dredge boat.

The first time he mentions it it is pretended that he developed the complete plan. Payne afterwards knew that Brady was preparing an application for letters patent, and, notwithstanding the pretended conversation between Brady and McAlester, and, notwithstanding McAlester's claim that the plan was his own which he says was made, he voluntarily assists Brady in preparing his application. (See p. 123.) " Said Payne made " the lettering on the drawing of my said dredge boat, " which is attached to my letters patent, said letter- " ing being that below the said drawing, commencing

" with the words, 'Edwin L. Brady's Bar Excavator,' " and ending with the word 'minnit.' "

If it were true that Brady stole the plan from McAlester he would have taken the whole, scrapers and all. Payne testifies: "I told General McAlester, shortly after Brady " made his first drawings, that Brady had appropriated " his ideas or his plan for raising or lowering the vessel " by means of water-tight compartments; by vessel, I " mean dredge boat; and that he had appropriated " Bishop's plan for agitating the mud; that was for first " drawing. Some time after I saw the second drawing " * * * I * * * told General McAlester that Brady had " applied for a patent for a dredge boat almost exactly " like that described in his (McAlester's) specifications " to the Department." (Ans. to int. 54, p. 136.)

Upon this information McAlester did nothing whatever, but allowed Brady to proceed without objection on his part and obtain letters patent.

McAlester's experience as an army engineer was not such as was calculated to give him any knowledge of the practical working of dredge boats, or to direct his attention to making improvements in them.

Upon the other hand, Brady had for many years been familiar with the practical working of dredging machinery and machinery of steam vessels, and testifies (p. 121), that as early as 1858 he conceived his first ideas of deepening channels of rivers by agitating the mud forming the bars at mouths of same, putting the mud in solution with water, and the current carrying the mud out to sea. He caused this plan to be practically applied in September, 1861.

He had been employed on dredge boats in 1853 (p. 93), and was familiar with all the kinds of dredge boats in use. Not only are the probabilities all in favor of Brady as the first inventor, but the fact that he was is established beyond dispute by the testimony of three disinterested witnesses, and also by that of Brady himself.

The three witnesses referred to are Israel W. Lamson, Charles J. Frautzen and William H. Allen, whose testimony commences respectively on pages 70, 82 and 87.

POINT V.

The Essayons infringed the invention patented by Brady.

a. This has not been disputed, and if it were, the testimony clearly shows such infringement. (See patent and specifications; testimony of Nelson Curtis, ints. 8 and 18, pp. 126, 127.)

Defendants' First Exception.

"The defendants except to the requirement of the Master that they should assign to the complainant their unpaid claim against the Government for extras as a condition of his not finding against the defendants for the amount of said claim" (p. 68).

This claim was for $3,775.31, for extras furnished by defendants in construction of the Essayons.

The Master held that, although the claim was just, its payment had been refused, and directed that defendants should assign the claim to the complainant "as part of "the profits to which he is entitled upon the accounting," and deposit the assignment with the Master (p. 31, assignment, p. 57). This exception should be overruled.

Defendants' Second and Third Exceptions.

The defendants except to the Master's "Finding B," p. 32, and they claim that the $5,575 there referred to should be allowed as a part of the cost of the dredge boat.

The facts found by the Master and the evidence introduced touching this matter appear on pages 30, 32 to 43, 51 to 53, 64, 65.

The contract made by defendants with Devereux and Ruddick was against public policy, and void.

The defendants must have known that the influence which Devereux and Ruddick pretended that Devereux could exercise over McAlester would be of a corrupting character.

What was in fact done or said and what persons really shared the $5,575 does not appear, for neither Ruddick nor Devereux was examined as a witness.

It is of no importance as affecting the validity of such a contract whether or not any corrupting influence was intended to be used, or was, in fact, used.

The Providence Tool Co. in Error v. Morris, 2 *Wall.*, 45.
Trest., applt., vs. Child, 21 *Wall.*, 448–453.

If it should be said that this is not a suit brought upon a contract invalid as against public policy, and that the contract having been executed and the moneys therein paid, the defendants are relieved *pro tanto*, an examination of the facts will disclose a sufficient answer.

According to the testimony, the oral contract was made a short time prior to the dredge boat contract (October 15, 1867).

Soon after a "Certificate" or memorandum of agreement was made and signed by the defendants' treasurer. It is without date and appears on page 43.

Upon it are the following endorsements: March 18, 1868, $1.249.91; April 22, 1868, $980.09; June 26, 1868, $1,951.25; August 15, 1868, $1,293.75.

Brady's letters patent are dated December 17, 1867. In December, 1867, he notified the defendants in writing of his having such a patent for a dredge boat like the one they were building; and the bill of complaint in this cause was filed April 9, 1868; and the subpœna was served on the defendants April 11, 1868 (p. 40).

After defendants accepted contract to build the Essayons, and after the work had been begun, Brady notified the defendants in writing of his having such a patent for a dredge boat like the one they were building (Answer, p. 9, bottom of page). It seems this notice was December 20, 1867 (cross int. 247, p. 119; Master's Report, p. 40).

Thus, long before the defendants made their *first* payment to Devereux and Ruddick, they had knowledge of Brady's patent, and that he would hold them liable as infringers.

After such knowledge and notice the appellants cannot deprive Brady of any portion of the moneys, to which he would otherwise be entitled, by paying the same upon a corrupt contract.

Upon the ground assumed by defendants, in order to give employment to their men and their machinery, they might have made just such a contract with Devereux and Ruddick, except omitting the sum of $5,575, and substituting all of the profits which should be derived, and they might thus have deprived the plaintiff of his remedy in this cause.

And if the preposterous claims of the defendants in the case at bar could be sustained, they would thus deprive the plaintiff of all the profits to which he was entitled, for, by their preposterous claims, and by their illegal payments to Devereux and Ruddick, they claim on the last page of their exceptions, not only that there are no profits for the complainants, but that there is a "balance of loss to the defendants" amounting to $2,821.08!

Defendants' Fourth Exception.

This exception relates to four findings of the Master, being F, I, K and L (p. 68).

L was subsequently changed by the Master and al-

lowed (see F, p. 36, and remarks of Master, pp. 35, 36, and see K, p. 37, and remarks of Master).

As to I, the statements of the Master, on pages 36 and 37, fully justify the disallowance complained of.

There is no fact found by the Master, and no evidence reported by him which would justify the allowance of any part of either of the sums disallowed in this finding.

Defendants' Fifth Exception.

This exception is to the Master's refusal to allow interest on the sums which the defendants alleged were paid out by them in advance of the receipts from the Government (p. 69), being, as they say in their exception, $\$1,882.\frac{63}{100}$ (p. 69), but in their detailed account, filed with the Master November 8, 1876 (pp. 15–19), no such claim was made, *and there was no suggestion that any moneys had been paid out by them in advance of receipts from the Government.*

In their amendment (not called for by the complainant), filed January 13, 1877 (pp. 24, 25), they give an itemized statement of interest, and claim that such interest amounts to $2,024.04; on February 15, 1877, they filed (without call from complainant) another itemized interest account, making the sum claimed $1,882.63.

Such accounts thus filed of themselves amount to nothing.

The Master's report contains no finding of any fact to sustain this claim, or any portion of it; nor is there a tittle of evidence reported showing, or tending to show that there is any excess or balance of interest in favor of defendants. For aught that appears, the materials used were purchased on credit; and for aught that appears, if an *accurate* account were made, the balance would be the other way.

As the Court cannot go outside of the Master's report

for facts or evidence, it is unnecessary to present the legal objections to such interest claim, if it had been shown to have any existence, in fact.

WILLIAM A. ABBOTT,

ALBERT A. ABBOTT,

Counsel for Respondent.

OFFICE ... SUPREME COURT U.S.
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17-192

Supreme Court of the United States

EDWIN L. BRADY,

Appellant,

vs.

THE ATLANTIC WORKS,

Respondent.

No. 102—IN EQUITY.

BRIEF FOR APPELLANT.

WILLIAM A. ABBOTT,

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WM. A. LEONARD, PRINTER,
No. 173 GREENWICH STREET, NEW YORK.
1882.

Supreme Court of the United States.

EDWIN L. BRADY,
Appellant,
vs.
THE ATLANTIC WORKS,
Respondent.

No. 102
IN EQUITY.

BRIEF FOR APPELLANT.

STATEMENT.

This appeal is by Edwin L. Brady, complainant below, from a decree in his favor (Printed Record, p. 192).

The questions on this appeal arise on exceptions of the complainant to the Master's report (Printed Record, p. 66, *et seq*).

The exceptions are now abandoned (though believed to have been well taken) except so far as they embrace or relate to one item of $66,000 for the hull of the Essayons, which was built for that sum by outside parties for the Atlantic Works.

This item is covered by exceptions, five in number, to the allowance by the Master of various items as general expenses (pp. 66, 67. See Master's Report, p. 14, *et seq*, especially under heading of General Expenses, commencing on p. 32, pp. 38, 39 and 40. See account of Atlantic Works at p. 15, also opinion of the Court at p. 189).

The Master found as follows:

"The hull was built for the Atlantic Works by an out-
"side party on contract for the stipulated price of sixty-

"six thousand dollars ($66,000)." (Masters note No. 8, p. 49.)

The Master also found as follows touching the hull:

"The contract price was $66,000; the amount actually "paid by the defendants to contractors for the hull "was $66,200.24, the $200.24 being for extra work. The "defendants put the machinery in the hull, and doubt- "less did some work on both machinery and hull in fitting "them to each other. This does not change the fact "that the hull was contracted for as a whole and was "built complete and delivered complete to the defend- "ants for the contract price, with a slight addition thereto "for extra work." (Masters note No. 14, p. 50.)

The Master says that a paper marked "f", produced by the Atlantic Works, is a statement showing costs, profit and loss on all jobs for the year 1868 (p. 60). The last page of this statement is on page 56, and the first page is on page 47.

Now the defendants in said statement place at first the actual cost incurred in 1868 on account of the Essayons as being $176,547.96. But in the same statement they deduct the following items as having been improperly included in the above $176,547.96, "Amounts not "chargeable with General Expenses:

"Dredge Boat Essayons, . . .	$66,000.00
"N. O. Furniture, ...	1,000.00
"Chromo, ...	1,398.31
"Horses and Carraiges, . . .	250.00"

The above $66,000 is for the hull, and the defendants not only in their "statement" excluded the hull from liability to bear any part of "General Expenses" for 1868, but in the account they filed they stated, "No "general expenses reckoned on hull, $66,000" (p. 19, 9th line).

The defendants testified that the reason for excluding the $66,000 was that "the said hull was not built at the

"works of the defendant Company," and the Master finds accordingly, viz.: "The reason given for not in-"cluding said $66,000 in the amount chargeable with "general expenses of 1868 was that the said hull was "not built at the works of the defendant Company." Masters note No. 9, p. 49.

And yet the Master, without any additional proof, or evidence of any mistake or omission (pp. 49, 50), included $66,000 on account of the hull as general expenses, which the defendants had excluded.

The Atlantic Works included in their general expenses for 1868 an item for salaries, of $11,037.66 (p. 46), which was allowed by the Master, together with salaries for $10,567.71 for 1867.

The Master finds that the cost of the work done on the Essayons in 1868, chargeable with general expenses of that year, to be $15,952.18, after making a proportion by which he ascertains the percentage of general expenses for that year on costs of jobs done by defendants (p. 61).

The method taken by the Master to ascertain the rate of general expenses is the same adopted by him and shown on page 48, Master's note No. 6.

The proportion on page 61 embraces in the first and second terms of the proportion said item of $66,000 for hull, and, as amended, by deducting this amount the proportion would be as follows:

Total cost of all jobs done in 1868, chargeable with General Expenses.	Cost of work done on Essayons in 1868, chargeable with general expenses.	Total general expenses for 1868
$526,568.91	$170,972.96	$49,130.14
66,000.00	66,000.00	
$460.568.91	$104,972.96	

and would make the percentage on general expenses of

the cost of jobs done by defendant in 1868 to be 10.6672 —|—, making the general expenses of the defendants for 1868, chargeable to work done on the Essayons, to be $11,197.67, instead of $15,952.18 as found by the Master (p. 61), the difference being $4,754.51.

POINT I.

The contract price paid by the Atlantic Works for the hull of the Essayons forms no part of the general expenses of the defendant Company.

POINT II.

All the cost to the Atlantic Works of making the contract, under which the hull of the Essayons was built would naturally devolve upon the salaried officers of the Company, and salaries are allowed for by the Master. The case does not show the Atlantic Works incurred any expense touching such contract.

POINT III.

The exceptions should be sustained so far as they except to the allowance of $66,000 paid by the Atlantic Works for the hull of the Essayons, and improperly allowed by the Master as general expenses.

WILLIAM A. ABBOTT,

ALBERT A. ABBOTT,

Of Counsel for Appellant.

17-192

OFFICE SUPREME COURT U.S.
FILED
JAN 15 1883
JAMES H. McKENNEY, CLERK.

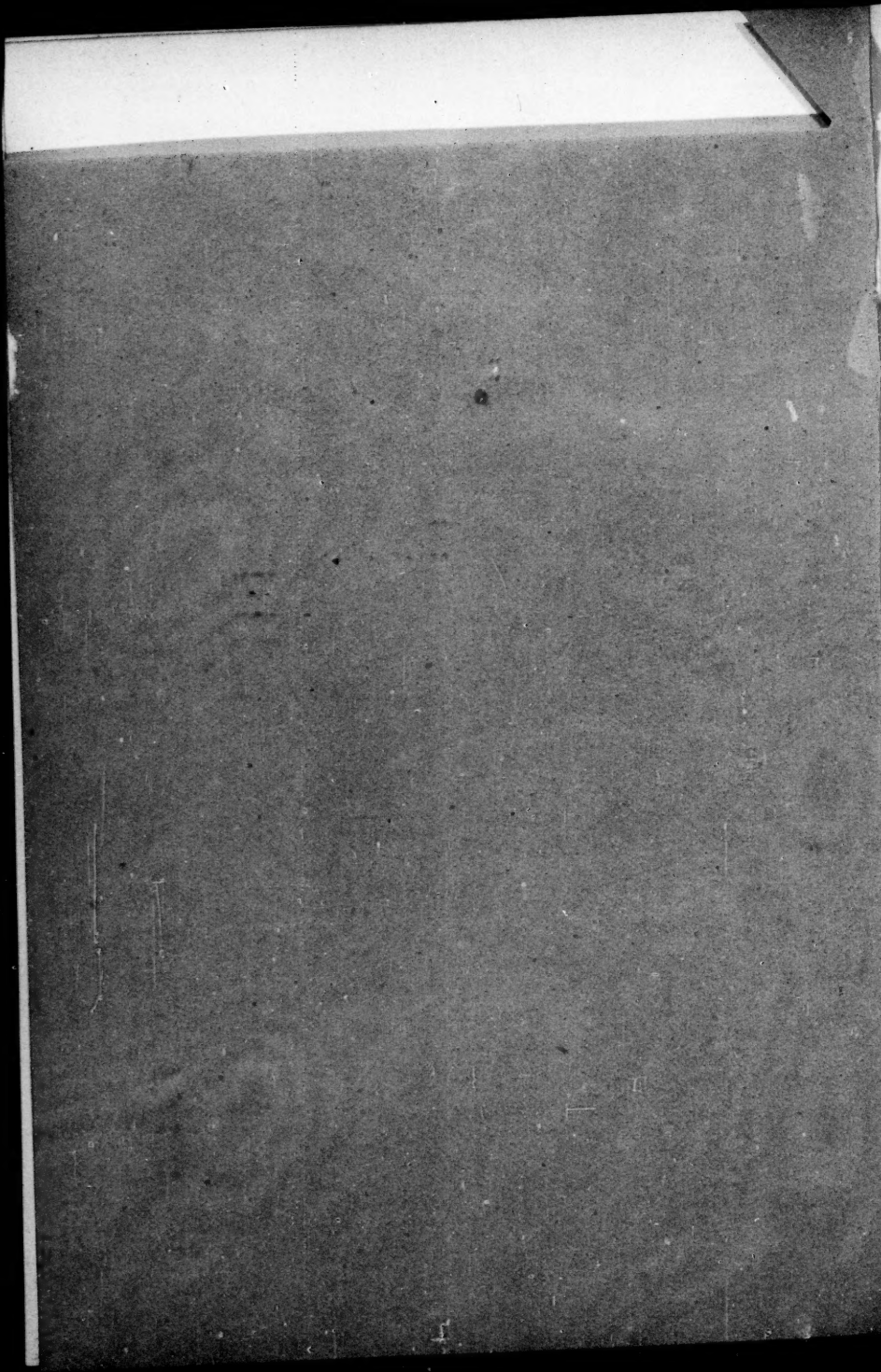
In the Supreme Court of the United States.

OCTOBER TERM, 1882.

THE ATLANTIC WORKS, APPELLANT,
vs.
EDWIN L. BRADY. } No. 101.

EDWIN L. BRADY, APPELLANT,
vs.
THE ATLANTIC WORKS. } No. 102.

BRIEF FOR THE UNITED STATES.



In the Supreme Court of the United States.

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THE ATLANTIC WORKS, APPELLANT,
vs.
EDWIN L. BRADY. } No. 101.

EDWIN L. BRADY, APPELLANT,
vs.
THE ATLANTIC WORKS. } No. 102.

BRIEF FOR THE UNITED STATES.

This is a bill filed by Edwin L. Brady against the Atlantic Works, a corporation of Massachusetts.

The complainant is the patentee of "a new and useful improved dredge-boat for excavating rivers," and filed his caveat the 17th May, 1867, and on the 17th December, 1867, the patent was issued to him. (pp. 5–7.)

The bill (pp. 1–5) avers that since the granting of said patent defendant has been building and vending *a* dredge-boat of the description covered by the patent, and that it was at the time of the filing of the bill constructing a

dredge-boat of the same description, intending to sell and selling the same to others.

That defendant has received gains and profits from said work amounting to $30,000, as complainant believes.

That complainant has requested defendant to desist from infringing his said patent, but without effect.

The bill prays for an account and an injunction, and, in connection with the averment that defendant had then in their possession a dredge-boat of the said description which they were about to sell or send away, it prays for a provisional preliminary injunction restraining defendant from removing said dredge-boat.

The answer (pp. 7–10) sets up:

1. That respondent has no knowledge touching the *caveat* and patent, except as derived from the bill, and denies that complainant was the original and first inventor of said dredge-boat, and that he has a valid patent therefor.

2. Denies that respondent ever infringed any patent of complainant, and that respondent ever knowingly infringed said patent.

3. That, in October, 1867, the United States advertised for proposals for a dredge-boat for the mouth of the river Mississippi, to be built according to plans to be furnished by the government; that respondent is a manufacturer of marine engines and steamboats, and made proposals under the said invitation, which were accepted, and respondent thereupon entered on the construction of the boat, and completed the same under the supervision of a United States officer, and in conform-

ity to the plans and specifications of the government, and that said boat went to the Mississippi River in charge of a United States officer; that, according to the information and belief of respondent, the said plans and specifications were furnished by Brevet Brig. Gen. M. D. McAlester, of the United States Engineer Corps, and that he was the author and inventor of the same in so far as they had any originality, and that in building said boat respondents were no more than the agents of the government.

4. That there was no novelty in complainant's invention; that the principle of the same had been known and used on the mouth of the Mississippi in 1864, in the steam dredge-boat Enoch Train; and had been also used by the government long prior to the alleged patent of complainant in the construction of light-draught monitors one of which was built at respondent's works.

5. Respondent avers that some time in 1866 and 1867, and prior to the date of complainant's alleged invention, complainant was employed as agent of one Horace Tyler, who then had a contract with the government for the improvement of the mouth of the Mississippi River; that said General McAlester was then stationed at New Orleans, and charged with the supervision of the execution of said contract; that complainant, as such agent, was then fitting out a steamboat at New Orleans to carry out said contract on a plan wholly distinct from his alleged invention; and that while he was so engaged, and before the application of complainant for a patent, said McAlester described to him a plan for a dredge-boat identical in plan and contrivance with the dredge-

boat constructed by respondent as aforesaid; that the steamboat fitted out by complainant proved a failure, and the contract with Tyler was annulled; that thereupon complainant made drawings of a dredge-boat on the plan suggested to him by McAlester, and claimed to be the originator and inventor of the same, and after respondent had contracted with the government and began work on the said dredge-boat and partly completed the same, informed respondent that a patent had been issued to him, and notified it that said dredge-boat was an infringement of said patent, but respondent denies the validity of complainant's claim, and that said patent has any validity.

On 5th April, 1869, the cause was at issue under a replication filed on that day. (p. 10.)

On 17th August, 1869, the answer was amended by setting up that respondent was bound by heavy bonds for the faithful performance of its contract with the government, entered into in perfect good faith and in entire ignorance of complainant's patent; that said boat was delivered to the government at Boston on the 16th June, 1868; that the greater part of the work on said boat was done in entire ignorance of complainant's claim, and that said contract was wholly terminated by the delivery of said boat as aforesaid; that since the construction of said boat respondent has done no work that could be possibly considered as an infringement of said alleged patent, nor does it intend or threaten to do any; that the wrongful acts complained of in the bill were done before this suit was brought; that this suit is really prosecuted to recover

damages for a past injury, and not a threatened one, and that equity has no jurisdiction.

On the 18th July, 1876, the answer was again amended in its fourth paragraph (p. 12), by setting up that the principle of the dredge-boat built by respondent had been substantially known and used on the mouth of the Mississippi River in 1859, in the steam dredge-boat Enoch Train, by Chas. H. Hyde, by Thomas G. Mackie and William A. Hyde, copartners under the style of Hyde & Mackie; and by Henry Wright, and by the United States Government during the rebellion and long prior to complainant's patent, in the construction of light-draught monitors.

Numerous depositions were taken by complainant and defendant on the issue as to the infringement.

On the 29th September, 1876, the cause came on for hearing, and, upon consideration, the court decreed that complainant's patent was valid; that the defendant had infringed it, and that complainant recover of the defendant the profits received by it from the infringement, to which end the cause was referred to a master, to take and state the account. (pp. 13–14.)

Much testimony was taken and argument had before the master, whose report was filed 30th April, 1878. (pp. 14–70.)

Numerous exceptions to the master's report were filed by the plaintiff and defendant respectively (pp. 66–69), which will be particularly noticed further on.

It should be remarked here that on the 21st Decembèr, 1876, the Hon. George P. Sanger, United States attorney for the district of Massachusetts, appeared for defendant,

and in that character, together with Mr. Robert B. Bishop, represented the defendant.

The cause came on again for hearing at the May term, 1878, upon the exceptions to the master's report; and on the 9th October, 1878, the court overruled all the exceptions and confirmed the master's report, and decreed that defendant should pay the plaintiff the sum of $6,604.82, as profits realized by defendant from the alleged infringement, together with $1,623.49 costs. (pp. 69–70.)

Both parties appealed from the decree, the appeal of the defendant being by direction of the government under section 1001 Revised Statutes.

Case No. 101.

Specifications of grounds of appeal.

The decrees, both interlocutory and final, are erroneous in the following particulars:

(1.) For that the bill was not dismissed, because the patent is invalid;

(*a.*) For that Brady was not the original and first inventor;

(*b.*) For that the invention is wanting in the article of novelty;

(*c.*) For that the patent claims more than was patentable, supposing, *argumenti gratia*, there was ground for issuing a patent of any kind.

(2.) Because the defendant's exceptions to the master's report were overruled.

(3.) Because equity has no jurisdiction in such a case as this.

FIRST POINT.

Was Brady the first inventor of the mechanism described in his letters patent?

Undoubtedly the evidence on this point is conflicting, but the testimony adduced by the complainant to establish his alleged priority is entirely overborne by that of the defendant, which makes it morally certain that there was no element of originality in Brady's conception. This we now proceed to show.

Laying out of view, for the present, the complainant's own testimony, his claim of priority as inventor rests upon the testimony of three witnesses, Lawson, Frautzen, and Allen, two of whom, Lawson and Allen, complainant met for the first time in December, 1865, and the other in February, 1866, in New Orleans.

Lawson was sent to New Orleans to protect the interests of certain insurance companies in a vessel sunk below the city, and his own in a brig then aground below the city.

Frautzen and Allen were both employés of the Atlantic and Mississippi Steamship Company, the one as bookkeeper and the other as agent.

The complainant, who had no regular place of business, was a daily lounger at the office of this company, where occurred most of the conversations in which complainant is said to have described his invention.

It was not as a matter of business, or because the complainant had been applied to or consulted on the subject that he is said to have talked about his plans of dredging-boats, but for the same reason as that people

generally in New Orleans were at that time constantly suggesting to each other or discussing plans for clearing out the channels of the Mississippi, which had filled up during the war, and upon the reopening of which the restoration of the commerce of the city depended.

It was thus, in the hurly-burly of a steamship company's office, that the complainant, a man unknown and unregarded, vied with others, no doubt equally as sanguine and as good authority as himself, in proposing schemes for deepening the river, and it is upon the evidence of discussions thus casual and desultory, with anybody and everybody, that the complainant founds his claim to be the first inventor.

Of the three witnesses as to these discussions in the office of the steamship company two must have been occupied with their duties when they took place; indeed, one of them, Captain Allen, says that when the conversations between complainant and Lamson occurred, "my attention and time was occupied by my business then" (Allen's deposition, Int. 12, pp. 87–88), and a test of the accuracy of the third one, Lamson's memory, is afforded by his answer to the one hundred and eighth interrogatory, in which he says complainant told him that the operations of the Wiggins Ferry dredging-boat were *successful*, it being incomprehensible how complainant could have had a motive to make a statement so entirely false and directly opposite to what he and others afterwards testified in the cause, namely, that the Wiggins Ferry was a disastrous failure.

Lamson testifies that he left New Orleans on the 22d April, 1866, and that complainant before that time un-

folded to him the principle of the dredging-boat afterwards patented by him, but it is easy to understand, without indulging in harsh imputations, that the witness unconsciously derived that impression from the complainant, either when he met him for the first time since he left New Orleans in June, 1869, on the South Ferry, New York, or shortly afterwards at complainant's office in Jersey City, when no doubt complainant induced him to believe the drawing he showed him there was the same he had shown him in New Orleans in 1866.

The defendant, in support of its contention that the complainant's pretended invention was pirated from the late General McAlester, of the Engineer Corps, United States Army, from whom complainant received it as an entirely original design, examined divers witnesses, to whose testimony some reference will now be made.

D. W. Payne (R., p. 129), formerly a lieutenant of engineers, United States Army, was, during the autumn and winter of 1866–'67, on duty at New Orleans under General McAlester, who was in charge of the work of deepening the river Mississippi.

He testifies that in December, 1866, complainant and others, in the name of Horace Tyler, were awarded the contract for deepening the Southwest Pass of the Mississippi River (Int. 13); that these contractors, under the directions of complainant, procured a boat, called the Wiggins Ferry, of which complainant was put in command, and fitted her with a dredging apparatus, of which one Bishop was the patentee; that complainant spoke *very confidently* of the success of the Bishop process (Int. 16), *never suggesting* any other scheme (Int. 17) while the work was going

forward; that in February, 1867, General McAlester told complainant that he had doubts of the success of the Wiggins Ferry, and that if she failed he would suggest to the engineer department a plan of his own, and then described a boat identical with that covered by the complainant's patent, *whereat the latter was well pleased*, but at the same time protested *confidence in the Wiggins Ferry* (Int. 18), giving no intimation that he was the author of a similar plan (Int. 19–21); that General McAlester wrote a letter to the engineer department embodying what he had said to the complainant (Int. 23); that it was not until June or July, 1867, and after General McAlester showed complainant a letter to General Humphreys, containing pen and ink sketches of one end of the boat proposed by him, that witness saw complainant's drawing of his patent. (Int. 58.) Before that time, Payne says, complainant's plans were not like that called for by the patent (Int. 68), and what this witness says about the character of these drawings is entitled to all the more credit from the fact that he assisted complainant in making them. (Int. 26).

Payne is fully confirmed by the witness John Roy, (R., p. 146), a civil engineer, architect, builder, and machinist, and one of the firm of Armstrong & Co., founders, New Orleans. This concern fitted up the Wiggins Ferry. Witness designed the machinery for fitting the Bishop patent to the Wiggins. He was constantly thrown with complainant, and talked with him freely, and never heard him intimate that he had any plan of his own. Says complainant had the utmost faith in the Wiggins Ferry (Int. 36), terming it the best he knew.

(38.) John Armstrong (R., p. 154), proprietor of Armstrong's foundry, never heard complainant refer to any plan of his own (Int. 6), although, as above stated, the machinery for the Wiggins was made at his foundry, and he was interested in the contract under which the Wiggins was operated. John Blackadder, a machinist (R., p. 155), deposes to the same effect. Thomas Creevy (R., p. 161), one of the gentlemen who was interested in the Wiggins Ferry, like the other witnesses of defendant above mentioned, is positive that complainant made no reference or claim to the plan covered by his patent at the time he, this witness, says he did. It would be needless repetition to do more than refer the court to the concurrent testimony of Horace Tyler (R., p. 166) and Chauncy Tyler. (R., p. 169).

It is to be remarked that, notwithstanding the formidable character of this testimony, the complainant's chariness of cross-examination is scarce reconcilable with entire confidence in his case.

The court will observe that several of our witnesses on this point were examined *de bene esse*, but although the court gave complainant time to cross-examine them (R., p. 13), *he did not use his privilege*.

These are considerations that greatly augment the force of the testimony, which, we submit, shows, to a moral demonstration, that the idea involved in complainant's patent was pirated from General McAlester.

SECOND POINT.

That the patent is void for want of novelty would seem clear, the mechanism covered by the patent being the com-

bination of a mud-fan and a boat so fitted with water-tight compartments as that it may be sunk on an even keel.

In 1859 the same combination, substantially, had been successfully applied in the dredge-boat Enoch Train. On this point the testimony is entirely free from conflict.

The operations with the Enoch Train were under a contract between the United States and Charles H. Hyde, for excavating the mouth of the Mississippi River, dated 24th March, 1859.

Referring to the deposition of Thomas G. Mackie (pp. 156–159) we learn that the contractor, having secured a vessel fitted up with buckets worked by steam at her bows, and being dissatisfied with her, concluded, at the suggestion of Mr. Kimball, one of the parties interested in the contract, to get a propeller and use her screw for cutting up the mud. Mr. Kimball went North to make the purchase, and bought the Enoch Train at Boston. (Int. 5.)

This witness did not see the operations of the Enoch Train upon the bar, but near the city of New Orleans, and he testifies that the arrangements for dredging in the Enoch Train and in the Essayons, the boat denounced as an infringement, are identically the same in principle.

When spoken to by Brady about his invention the witness replied, "Bless your soul, I have done that before; that is on the Enoch Train;" and upon Brady saying "his was different by having her on an even keel," the witness replied, "Well, that's not necessary; we sunk one end of the Enoch Train, and got her dredging machinery to the mud, and accomplished more work than he could do; *but if he or any other body wanted to sink*

her forward all he had got to do was to put in another tank in the bows." (Int. 9, p. 158.) When asked (Int. 10) why he did not put a tank in the bows of the Enoch Train he answers:

> Because in order to dredge, it wasn't necessary, and was objectionable in this, that she would have a greater draught of water and would be less manageable. With a light boat it would be advisable to put in a tank forward to keep her steady; but even then I should sink the end with which I was dredging most, and only sink the other end sufficient to keep her steady. I would not work a dredging boat on an even keel, because there would be *more draught of water and greater loss of power.*

The witness also said that the Enoch Train had but one tank only, which was in the stern.

The witness was half owner of this vessel, and his cross-examination by complainant *was very brief.*

It will be observed that the difference between the operation of a boat like the Enoch Train and the Essayons, or any boat made after the specifications of the complainant's patent, is that the former goes to her work stern foremost, while the latter goes bows on.

The opinion expressed by the witness Mackie, as to the inutility and hinderance of dredging with an even keel, is powerfully sustained by the testimony of William H. A. Putnam (p. 159), who was, at the time he deposed, commander of the Essayons, and Maj. Charles W. Howell, of the Engineer Corps (p. 164), then in charge of the defenses of New Orleans and the work for the improvement of the mouth of the Mississippi.

Putnam says that, after experimenting with the Essayons, the best way of using her is to "sink the *dredging end* of the vessel, by filling up *the tanks at that end* with water, to any depth required." (Int. 5.)

In answer to the seventh question, the witness says: "*We have always done so* (*i. e., sunk the dredging end*), so that the dredging end has, in the working, always been lower than the other end. WE HAVE NEVER OPERATED HER ON AN EVEN KEEL."

The cross-examination of the witness was very brief, and *not at all aggressive.*

Major Howell had spent three weeks on the Essayons, while working, and, in describing her work, says: "In this operation *the end of the vessel carrying the excavator* is sunk by admitting water into the tanks so as to *depress it much lower than the other end.*" He says (Int. 5) that *sinking the dredging end* is one of the "essential features" of the process, and the Essayons has never been worked on an even keel, to his knowledge, and that it was matter of record in his office that his predecessors, General McAlester and Colonel Prime, "*gave orders to work her by sinking her dredging end;* and I gave directions to have those previous orders followed."

This witness was hardly cross-examined at all.

Henry Wright, who was master of the Enoch Train in 1859, describes her operations and her effective work as a dredge-boat. The witness had been aboard the Essayons; had seen her in dry-dock and at work, and understood her machinery and mode of operation; and when asked (Int. 9) what are her mode of operations and apparatus for dredging, says: "The apparatus of the Essayons and the way she operates are the same as those of the Enoch Train. There is no difference in the principle of their operations. The Essayons always operates in the same way, so far as I have seen her—the same way

in which we used the Enoch Train. She goes at the mud in the same way, *and sinks the end where the dredging screw is, and the screw is similar to that of the Enoch Train.*"

When asked how the Enoch Train came to be employed in this service, he said that a year or two previous to the operations of the Train several large French steamers, drawing 18 feet, had dug themselves through 15 feet *by turning stern on and using their propellers.* (Int. 7.)

Reference is also made to the deposition of Wm. A. Hyde (p. 171). This deposition and that of Wright were taken *de bene esse* and without notice; but, as already stated, by order of the court (p. 13), leave was given complainant to cross-examine these important witnesses, *but he did not use his privilege.*

The feature of a vessel fitted with water-tight compartments precisely like those called for by complainant's patent was in use by the government during the war in constructing what were known as light-draught monitors (*vide* deposition of Oliver Edwards, president of Atlantic Works, R., p. 143); see also the deposition of Payne (R., p. 129, Int. 86), who says water-tight compartments or tanks are universally used in submerging dry-docks.

The evidence touching the operations of the Enoch Train and the Essayons shows that complainant's contrivance for sinking a dredging-boat on an even keel was wholly without utility, the Essayons having been always tilted in the bows when at work. The complainant is the only witness who advocates the even-keel principle, and complainant, by his own confession, *never saw a dredging-boat operated on that principle* (R., p. 101,

Brady's depo.); indeed, he clearly shows himself to be a mere theorist, and what he says is literally "mere prattle, without practice."

'Tis scarce conceivable that General McAlester could have regarded what he called his plan as patentable, consisting, as it did, in using a propeller at the bow instead of the stern of a vessel for dredging purposes, as theretofore had been the case, or that he deemed it worth his while to open a contest with complainant before the Patent Office touching his application for a patent, whose validity, if issued, could not be sustained in the courts. It is much to be regretted that General McAlester was dead when complainant's deposition was taken.

THIRD POINT.

That the patent is void because too comprehensive would seem to follow from what has been said already, for, as we have seen, the combination of a boat with water-tight compartments and a "mud-fan" had been anticipated in the Enoch Train. In all the mechanism described in the specification of the patent, the only thing for which the complainant could have a pretext for a patent is the attachment of a "mud-fan" to the bow instead of the stern of the dredging-boat, but it is clear that so obvious an application of an old device is not patentable, particularly as it clearly appears that the new application possesses no advantage over the old one.

DEFENDANT'S EXCEPTIONS TO THE MASTER'S REPORT.

(R., pp. 68–69.)

This case arose before the act of 1870, and stands unaffected by the rule as to damages prescribed by that law.

The complainant has chosen to place the defendant on the footing of a trustee, and to demand from it all the profit derived from the construction and sale of the dredging-boat alleged to be an infringement of complainant's patent, instead of proceeding at law for damages, regardless of whether defendant has profited by the imputed infringement or not.

The defendant denies that any profits resulted from the contract to construct the Essayons, the infringing boat; on the contrary, the defendant insists that the adventure resulted in a loss.

The question is not what profits the defendant might have made or ought to have made, but what were the *actual* profits. (Dean *v.* Mason, 20 How., 198, 203; Livingston *v.* Woodworth, 15 How., 546.)

FIRST EXCEPTION.

This exception is to the master's charge against defendant of $3,775.31, the amount of an *uncollected and rejected* claim against the government for extra work on the Essayons.

However this allowance may be viewed in the state of the account as acted on by the court below, the allowance by this court of other items claimed under defend-

ant's exceptions, to an amount sufficient to overcome the balance to the credit of complainant, would certainly make it unjust to treat the claim for extras as representing profits.

SECOND EXCEPTION.

The next exception is to the master's refusal to allow $5,575, the amount of commissions paid Ruddick and Devereux for alleged services in securing the defendant the contract for building the Essayons. (See master's report, R., pp. 31–32.)

The complainant contends that the allowances should not be made, because the services undertaken were to bring improper influences to bear on a public officer.

Supposing this to be true, the contract is an executed one, the services having been rendered and the compensation paid. In claiming profits the complainant has no right to insist upon anything beyond actual profits—*net profits*. If the amount in question had been *profits* tainted with illegality, can there be a question that illegality would be no answer to the demand? Upon the same principle the master had no right to exclude this item. The case of Brooks *v.* Martin (2 Wall., 70) establishes this view, and renders discussion of the point quite unnecessary. It may not be inapposite to give the following characteristic quotation from the opinion of Mr. Justice Grier, Random *v.* Tobey (11 How., 521): "If the defendant should be sued for his tailor's bill, and come into court with the clothes made for him on his back, and plead that he was not bound to pay for them because the importer had smuggled the cloth, he would present a case

of equal merits and parallel with the present, but would not be likely to have the verdict of the jury or judgment of the court in his favor."

THIRD EXCEPTION.

This exception is to finding C, that the total amount expended directly on the Essayons is $195,347.10. We claim that the sum, $5,575, mentioned in exception 2, should be included in the expenditures on the boat. In discussing exception 2 we have said all that need be said touching this exception.

FOURTH EXCEPTION.

The disallowance of certain items in making up the general expenses for the years 1867 and 1868 is embraced herein. This exception we submit to the court with the observation touching the disallowances on the score of advertising, that nothing so transient and fugitive in character as advertising appliances should have been placed to the account of defendant's plant, and with the observation touching the disallowance of item 217, for $3,038.21, and item 239, for $2,858.40, the same representing the amount of depreciation in the value of the tools used in defendant's works. The rejection of these items seems to have been based on some observations of this court in Rubber Company *v.* Goodyear (9 Wall., 803), which, however appropriate to the special circumstances of that case, were by no means intended to be taken as a general rule for the government of other cases. In the case referred to the master had already made allowances for repairs so large as to cover any depreciation in tools, and, *for that reason*, no further

allowance was made. If a manufacturer can only maintain his ground against competition by employing new and improved tools and machinery certainly the loss on what has been thus supplanted and laid aside should enter into the account of general expenses.

The defendant claims that the findings of the master should be changed in accordance with the above exceptions, so that the account shall stand as given in page 69 of the record.

FIFTH POINT.

(5.) The master's refusal to allow interest on sums paid in advance of receipts from the government was erroneous, and cannot be justified on the ground taken by complainant, that there was no evidence that such advances were made. If the item had not been rejected the evidence to support it would have been adduced. Certainly the master's action was not based on any such ground.

CASE NO. 102.

The appeal in this case brings up for consideration the complainant's exceptions to the master's report.

Of these exceptions all but one are abandoned in the brief filed for complainant, and that covers the allowance of $66,000 as the cost of constructing the hull of the Essayons. The ground on which this exception is urged is mainly that the defendant, in a *projet* of an account laid before the master, did not claim this item as an element

of the cost of the Essayons on which the general expenses of the defendant were to be reckoned. The fact that the hull of this vessel was not built at the defendant's works is no better ground for rejecting it as a part of the cost of the work than it would be for the rejection of every kind of material used therein that did not come to the hands of the defendant in a perfectly crude state.

It can hardly be maintained that the defendant is estopped by its former omission of the item of $66,000 from its estimate of the cost of the Essayons, or that the master was unwarranted in protecting the defendant against its own improvident mistake, albeit the master, in doing so, proceeded on no new *data*, there being no necessity for any.

JURISDICTION.

Supposing, now, that the patent is valid, the case made in the bill comes within no recognized category of equity jurisdiction.

Nowhere is there a pretense of any invasion of the patent, except that involved in the construction of the dredge-boat Essayons for the United States, *on its plans and under its directions*, or a pretense that any other invasion is threatened or probable.

While the bill prays for an injunction, none was moved for, *nor does the final decree even restrain the defendant in any respect.*

The bill is founded on a *single isolated* wrong. There is no intimation of irremediable damage or multiplicity of suits, on one or the other of which grounds must rest

the jurisdiction of equity to employ the extraordinary process of injunction, and to deprive the defendant of its constitutional guaranty of trial by jury.

The necessity for any discussion of this jurisdictional point is rendered unnecessary by the recent case of Root *v.* R. R. Co. (105 U. S., p. 189), where the jurisdiction of equity in patent cases was defined, upon great consideration.

Again, the extraordinary remedy by injunction is never awarded at the suit of one who has encouraged or acquiesced in the infringement of which he complains. (Curtis Pat., § 440; Ker on Inj., pp. 203–205.)

The complainant, although he knew that the United States, through General McAlester, was advertising for proposals to build a dredge-boat on the principle of his patent, and although he knew that the defendant was the successful bidder for the work (Brady's dep., R., pp. 124, 114–115), gave defendant no warning, and deferred filing his bill until defendant had almost completed the dredge-boat.

Complainant having entered upon a course of conduct towards defendant by which it was led to embark in a large undertaking, the performance of which was heavily secured to the government, must necessarily have applied in vain for an injunction to a court of conscience.

It being thus apparent that equity has no jurisdiction to give relief by injunction in any such case as this, and there being no other head of equity on which the bill can be supported, it follows that the court below exceeded its jurisdiction in entering a decree against the defendant.

To borrow the language of this court in Root *v.* Railroad Company (*supra*):

> It does not appear from the allegations of the bill in the present case that there are any circumstances which would render an action at law for the recovery of damages an inadequate remedy for the wrongs complained of. * * *

We submit that the decree should be reversed, with instructions to the court below to dismiss the bill.

WM. A. MAURY,
Assistant Attorney-General.